WEBVTT

1 00:00:02.430 --> 00:00:06.210 <v ->Prior to joining the faculty at YSPH,</v>

2 00:00:06.210 --> 00:00:07.650 Dr. Cameron was a member

3 00:00:07.650 --> 00:00:10.080 of the Global Health Cost Consortium,

4 00:00:10.080 --> 00:00:11.190 an initiative funded

5 00:00:11.190 --> 00:00:13.620 by the Bill and Melinda Gates Foundation

6 00:00:13.620 --> 00:00:15.780 to provide decision makers

7 00:00:15.780 --> 00:00:17.370 with improved resources

8 00:00:17.370 --> 00:00:18.960 to estimate the cost

9 00:00:18.960 --> 00:00:21.450 of HIV and tuberculosis programs,

10 00:00:21.450 --> 00:00:26.450 and to improve the availability, quality, timing,

11 00:00:26.550 --> 00:00:30.150 and policy relevance of cost information.

12 00:00:30.150 --> 00:00:32.760 He holds an MA in international development

13 00:00:32.760 --> 00:00:37.020 from American University and a PhD in health policy

14 00:00:37.020 --> 00:00:38.850 from the University of California Berkeley

15 00:00:38.850 --> 00:00:40.620 School of Public Health.

16 00:00:40.620 --> 00:00:42.157 The title of his talk is

17 00:00:42.157 --> 00:00:44.510 ”Costing and Economic Evaluations

18 00:00:44.510 --> 00:00:46.410 in Implementation Science.”

19 00:00:46.410 --> 00:00:48.300 He'll speak for about 45 minutes,

20 00:00:48.300 --> 00:00:52.050 and then we'll open the floor for questions and discussion.

21 00:00:52.050 --> 00:00:53.193 There you go, drew.

22 00:00:54.120 --> 00:00:56.220 <v ->Thanks very much for that introduction, Debbie,</v>

23 00:00:56.220 --> 00:00:59.340 and thank you to those who were kind enough

24 00:00:59.340 --> 00:01:00.573 to join the call today.

25 00:01:01.590 --> 00:01:03.930 I won't introduce myself any further

26 00:01:03.930 --> 00:01:05.820 than to say as a member

27 00:01:05.820 --> 00:01:07.680 of the Center for Methods

28 00:01:07.680 --> 00:01:09.600 and Implementation and Prevention Science,

29 00:01:09.600 --> 00:01:12.600 this is a pretty sort of exciting opportunity

30 00:01:12.600 --> 00:01:14.280 to share some of the work

31 00:01:14.280 --> 00:01:16.440 that I've been involved with in the past.

32 00:01:16.440 --> 00:01:20.760 This talk though, I'm gonna focus largely on, you know,

33 00:01:20.760 --> 00:01:24.780 what might be for many of you a review of topics

34 00:01:24.780 --> 00:01:28.110 as they relate to economic evaluations and costing.

35 00:01:28.110 --> 00:01:30.870 So please do bear with me on that front.

36 00:01:30.870 --> 00:01:33.660 I'll try to get to some novel research findings

37 00:01:33.660 --> 00:01:35.640 towards the end of the talk,

38 00:01:35.640 --> 00:01:39.900 but this is sort of designed as a, anyone can participate.

39 00:01:39.900 --> 00:01:41.970 You don't have to have much of any background

40 00:01:41.970 --> 00:01:43.590 in economic evaluation or costing.

41 00:01:43.590 --> 00:01:46.770 So without much more,

42 00:01:46.770 --> 00:01:50.790 let me get into the topics here.

43 00:01:50.790 --> 00:01:52.740 Okay, so this talk is divided

44 00:01:52.740 --> 00:01:54.060 into three main sections.

45 00:01:54.060 --> 00:01:56.700 First, I'm gonna discuss some key economics concepts

46 00:01:56.700 --> 00:01:59.490 that kind of lay the groundwork for the rest of the talk.

47 00:01:59.490 --> 00:02:01.290 I'll briefly cover some different types

48 00:02:01.290 --> 00:02:04.650 of economic evaluation and decision analyses

49 00:02:04.650 --> 00:02:06.840 and how costing

50 00:02:06.840 --> 00:02:08.400 in particular is an important

51 00:02:08.400 --> 00:02:12.150 and often overlooked component of implementation science.

52 00:02:12.150 --> 00:02:13.740 Second, we'll get into the nitty gritty

53 00:02:13.740 --> 00:02:15.090 of costs and costing.

54 00:02:15.090 --> 00:02:17.340 So what are they, who uses them?

55 00:02:17.340 --> 00:02:18.510 How do you do it?

56 00:02:18.510 --> 00:02:20.370 And what are some of the key considerations

57 00:02:20.370 --> 00:02:22.230 that you have to make along the way

58 00:02:22.230 --> 00:02:25.953 when you are conducting a costing study?

59 00:02:26.790 --> 00:02:29.100 If you have a great deal of experience with costing already,

60 00:02:29.100 --> 00:02:31.050 some of you may find some of this to be familiar,

61 00:02:31.050 --> 00:02:32.760 so I'll apologize in advance,

62 00:02:32.760 --> 00:02:35.460 but I'm still eager for your feedback.

63 00:02:35.460 --> 00:02:36.293 And then finally,

64 00:02:36.293 --> 00:02:38.736 I'm gonna briefly discuss the efforts

65 00:02:38.736 --> 00:02:39.600 of the Global Health Cost Consortium,

66 00:02:39.600 --> 00:02:41.190 which includes a website

67 00:02:41.190 --> 00:02:43.440 with a ton of great costing resources.

68 00:02:43.440 --> 00:02:44.400 So if you're more interested

69 00:02:44.400 --> 00:02:46.530 in costing and economic evaluation,

70 00:02:46.530 --> 00:02:49.620 I can direct you towards those at the end of the talk.

71 00:02:49.620 --> 00:02:50.940 And as part of that effort,

72 00:02:50.940 --> 00:02:52.140 I'll share some of the results

73 00:02:52.140 --> 00:02:53.670 of a somewhat recent publication,

74 00:02:53.670 --> 00:02:56.610 a systematic review of costing literature on HIV

75 00:02:56.610 --> 00:02:58.230 in Sub-Saharan Africa,

76 00:02:58.230 --> 00:03:01.500 and another study that's in progress.

77 00:03:01.500 --> 00:03:04.560 So let me move ahead here.

78 00:03:04.560 --> 00:03:06.030 So there are four main takeaways.

79 00:03:06.030 --> 00:03:09.510 You know, if you take nothing else from this talk,

80 00:03:09.510 --> 00:03:11.523 and I wouldn't blame you if you didn't.

81 00:03:13.350 --> 00:03:17.070 Four things that I'd like you to walk away from this talk,

82 00:03:17.070 --> 00:03:20.460 considering like number one is perspective.

83 00:03:20.460 --> 00:03:23.940 I'll get into what perspective is, and timeframe.

84 00:03:23.940 --> 00:03:26.130 These are two concepts that matter,

85 00:03:26.130 --> 00:03:30.360 I think the absolute most in terms of economic evaluations

86 00:03:30.360 --> 00:03:33.359 and costing and how they're conducted and the findings,

87 00:03:33.359 --> 00:03:34.740 you know, that you were able to generalize

88 00:03:34.740 --> 00:03:36.513 from these studies.

89 00:03:37.440 --> 00:03:39.780 I wanna also leave you with the impression

90 00:03:39.780 --> 00:03:42.270 that although expenditures are real,

91 00:03:42.270 --> 00:03:43.380 they're real things,

92 00:03:43.380 --> 00:03:44.790 things you can quantify,

93 00:03:44.790 --> 00:03:46.830 costs really aren't.

94 00:03:46.830 --> 00:03:48.840 They're conceptual in nature,

95 00:03:48.840 --> 00:03:51.810 and they depend on a lot of different assumptions.

96 00:03:51.810 --> 00:03:55.110 So, you know, we'll get into the nitty gritty of that.

97 00:03:55.110 --> 00:03:57.150 I'd also like to leave you with the idea

98 00:03:57.150 --> 00:03:59.520 that perfect is often the enemy of the good.

99 00:03:59.520 --> 00:04:01.260 I think that's a concept that's very familiar

100 00:04:01.260 --> 00:04:04.470 to anybody who's ever published a paper, for example.

101 00:04:04.470 --> 00:04:06.150 But on the flip side,

102 00:04:06.150 --> 00:04:09.537 little details in your decision making and costing

103 00:04:09.537 --> 00:04:12.510 and data collection can matter a lot.

104 00:04:12.510 --> 00:04:15.540 So there's a balance that we try to strike

105 00:04:15.540 --> 00:04:17.610 when we do these types of studies.

106 00:04:17.610 --> 00:04:18.600 And then finally,

107 00:04:18.600 --> 00:04:21.660 reporting standards and quality are two areas

108 00:04:21.660 --> 00:04:23.940 that have a lot of room to improve in this field.

109 00:04:23.940 --> 00:04:26.193 And I'll show you some examples of why.

110 00:04:27.300 --> 00:04:29.310 So what is economic evaluation?

111 00:04:29.310 --> 00:04:32.820 Economic evaluation is an often sort of misunderstood term.

112 00:04:32.820 --> 00:04:34.740 You've probably heard of monitoring and evaluation,

113 00:04:34.740 --> 00:04:37.180 which typically refers to monitoring processes

114 00:04:37.180 --> 00:04:40.830 for a program's implementation and ongoing operation.

115 00:04:40.830 --> 00:04:42.330 If you work in the social sciences,

116 00:04:42.330 --> 00:04:44.160 you've probably heard of impact evaluation,

117 00:04:44.160 --> 00:04:47.790 which typically refers to evaluating, say, health, social,

118 00:04:47.790 --> 00:04:50.370 or economic impacts of the program.

119 00:04:50.370 --> 00:04:54.390 These are all separate but related fields and methods.

120 00:04:54.390 --> 00:04:57.750 Economic evaluation is sort of an umbrella term.

121 00:04:57.750 --> 00:05:00.300 This includes a broad range of comparative methods

122 00:05:00.300 --> 00:05:01.260 to help to evaluate

123 00:05:01.260 --> 00:05:04.650 choices or trade-offs between costs and benefits.

124 00:05:04.650 --> 00:05:08.013 Another familiar term might be decision analysis.

125 00:05:08.013 --> 00:05:10.208 At the heart though of economic evaluation

126 00:05:10.208 --> 00:05:12.930 and decision analysis is a concept that, you know,

127 00:05:12.930 --> 00:05:17.580 we spoke about or that I'll speak about a little further

128 00:05:17.580 --> 00:05:18.450 into the talk.

129 00:05:18.450 --> 00:05:20.370 And that is opportunity costs.

130 00:05:20.370 --> 00:05:22.620 So when we talk about economic evaluation,

131 00:05:22.620 --> 00:05:24.120 what we typically wanna understand

132 00:05:24.120 --> 00:05:26.310 is what's the best value for money?

133 00:05:26.310 --> 00:05:27.920 And in the most basic sense,

134 00:05:27.920 --> 00:05:31.140 cost is what you pay and value is what you get.

135 00:05:31.140 --> 00:05:31.990 It's the benefit.

136 00:05:32.850 --> 00:05:35.880 So it won't always indicate a clear choice,

137 00:05:35.880 --> 00:05:39.630 but it will help to evaluate options quantitatively

138 00:05:39.630 --> 00:05:42.093 based on a defined set of decisions.

139 00:05:43.020 --> 00:05:46.590 These processes, they aim to capture opportunity costs

140 00:05:46.590 --> 00:05:48.300 of doing one thing over another.

141 00:05:48.300 --> 00:05:49.200 So for example,

142 00:05:49.200 --> 00:05:51.750 do we invest in home visits

143 00:05:51.750 --> 00:05:54.750 or do we make mass media platforms

144 00:05:54.750 --> 00:05:56.940 to disseminate behavior change communication

145 00:05:56.940 --> 00:06:01.650 for improved, say infant and young child feeding practices,

146 00:06:01.650 --> 00:06:04.980 or do we promote home gardens or vitamin A capsule

147 00:06:04.980 --> 00:06:09.783 supplementations to address micronutrient deficiencies?

148 00:06:10.620 --> 00:06:12.000 So lastly, I'll leave you

149 00:06:12.000 --> 00:06:13.650 with the thought that economic evaluations

150 00:06:13.650 --> 00:06:15.270 are comparative by nature.

151 00:06:15.270 --> 00:06:18.420 So not only do they compare costs and benefits,

152 00:06:18.420 --> 00:06:19.980 but a comprehensive evaluation

153 00:06:19.980 --> 00:06:22.830 will compare two or more different options.

154 00:06:22.830 --> 00:06:24.690 So let's look at a couple of different types

155 00:06:24.690 --> 00:06:26.280 of economic evaluations.

156 00:06:26.280 --> 00:06:29.520 So you may have come across these in the past.

157 00:06:29.520 --> 00:06:30.930 There's really a large family

158 00:06:30.930 --> 00:06:33.180 of economic evaluation methods,

159 00:06:33.180 --> 00:06:35.580 but it's important to note that all of these different types

160 00:06:35.580 --> 00:06:38.730 of analyses and tools at their core

161 00:06:38.730 --> 00:06:40.410 are measuring costs in dollars.

162 00:06:40.410 --> 00:06:42.870 So that that column down the middle.

163 00:06:42.870 --> 00:06:46.110 And that's the main focus of the rest of this talk.

164 00:06:46.110 --> 00:06:49.920 But a key difference across these different types

165 00:06:49.920 --> 00:06:53.850 of evaluations is gonna be whose costs it is

166 00:06:53.850 --> 00:06:55.230 that we're taking into account

167 00:06:55.230 --> 00:06:57.600 as well as how we're measuring benefits.

168 00:06:57.600 --> 00:07:00.120 So all decision analyses are comparative,

169 00:07:00.120 --> 00:07:01.260 as I mentioned,

170 00:07:01.260 --> 00:07:03.060 we're gonna compare one or more options

171 00:07:03.060 --> 00:07:04.200 in relation to another.

172 00:07:04.200 --> 00:07:05.940 So that other option could just be

173 00:07:05.940 --> 00:07:06.900 what the current standard

174 00:07:06.900 --> 00:07:09.000 of care is or the status quo.

175 00:07:09.000 --> 00:07:10.800 It could be doing nothing

176 00:07:10.800 --> 00:07:13.020 or it could be another active intervention.

177 00:07:13.020 --> 00:07:14.850 So one of the first things that we need to do

178 00:07:14.850 --> 00:07:15.960 in any such analysis

179 00:07:15.960 --> 00:07:18.496 is to understand where a comparator is

180 00:07:18.496 --> 00:07:21.188 and the most basic type of economic evaluation

181 00:07:21.188 --> 00:07:22.830 is the one on the top there.

182 00:07:22.830 --> 00:07:25.140 We'll start with cost efficiency analysis,

183 00:07:25.140 --> 00:07:27.690 which is sort of a partial form of economic appraisal

184 00:07:27.690 --> 00:07:29.030 'cause it looks only at the costs

185 00:07:29.030 --> 00:07:30.660 of the program and it doesn't

186 00:07:30.660 --> 00:07:33.900 really provide any information on let's say agriculture,

187 00:07:33.900 --> 00:07:36.570 nutrition, or health outcome of interest.

188 00:07:36.570 --> 00:07:39.600 This typically reports out on the cost per output achieved.

189 00:07:39.600 --> 00:07:41.130 So another example of this might be

190 00:07:41.130 --> 00:07:43.650 like a budget impact analysis where you're looking

191 00:07:43.650 --> 00:07:46.860 at the cost per output, per patient served,

192 00:07:46.860 --> 00:07:49.923 or per vaccine administered.

193 00:07:50.850 --> 00:07:53.880 Now the more common type of economic evaluation

194 00:07:53.880 --> 00:07:55.920 for evaluating health interventions

195 00:07:55.920 --> 00:07:58.170 is cost effectiveness analysis.

196 00:07:58.170 --> 00:08:02.250 And CEAs, they compare the cost and outcomes of two or more

197 00:08:02.250 --> 00:08:05.610 alternatives or compare a new intervention

198 00:08:05.610 --> 00:08:07.410 or treatment with the status quo.

199 00:08:07.410 --> 00:08:09.900 CEAs relate the cost associated

200 00:08:09.900 --> 00:08:13.920 with the health outcome such as cost per disease avoided,

201 00:08:13.920 --> 00:08:15.180 cost per death avoided

202 00:08:15.180 --> 00:08:19.020 or additional expected life year for example.

203 00:08:19.020 --> 00:08:21.030 And then there's some other types of analysis

204 00:08:21.030 --> 00:08:22.710 that we won't get into too much.

205 00:08:22.710 --> 00:08:24.870 Cost utility analysis,

206 00:08:24.870 --> 00:08:28.650 you know, includes analyses with say disability

207 00:08:28.650 --> 00:08:30.550 or quality adjusted life years

208 00:08:31.950 --> 00:08:36.950 or other standardized measures of preference.

209 00:08:37.230 --> 00:08:38.970 And then there's cost benefit analysis,

210 00:08:38.970 --> 00:08:42.210 which is a method in which both the costs and the benefits

211 00:08:42.210 --> 00:08:45.209 of the intervention are expressed in monetary terms.

212 00:08:45.209 --> 00:08:47.490 So in agriculture for example,

213 00:08:47.490 --> 00:08:50.700 this might be the value of increased crop production.

214 00:08:50.700 --> 00:08:54.180 While in health it would be the dollar value associated

215 00:08:54.180 --> 00:08:55.770 with the life years that were gained

216 00:08:55.770 --> 00:08:57.120 because of an intervention.

217 00:08:57.960 --> 00:09:00.900 There's several other types of decision analysis

218 00:09:00.900 --> 00:09:03.180 that I haven't included in this table

219 00:09:03.180 --> 00:09:05.880 and they exist, so sorry.

220 00:09:05.880 --> 00:09:09.630 So those include return on investment analysis,

221 00:09:09.630 --> 00:09:12.063 cost of illness analysis and others.

222 00:09:13.140 --> 00:09:14.220 So as I've suggested,

223 00:09:14.220 --> 00:09:18.180 different sectors kind of use different of these approaches.

224 00:09:18.180 --> 00:09:19.013 So for example,

225 00:09:19.013 --> 00:09:21.090 global health and education disciplines

226 00:09:21.090 --> 00:09:24.540 have promoted the use of cost effectiveness analysis.

227 00:09:24.540 --> 00:09:27.690 Implementation science probably naturally falls

228 00:09:27.690 --> 00:09:29.820 under this category

229 00:09:29.820 --> 00:09:32.580 or in the cost efficiency analysis category

230 00:09:32.580 --> 00:09:34.101 with a little bit more emphasis

231 00:09:34.101 --> 00:09:36.210 on perhaps cost efficiency

232 00:09:36.210 --> 00:09:39.420 depending on the scope of the evaluation taking place.

233 00:09:39.420 --> 00:09:41.820 And I'll get into that in a moment.

234 00:09:41.820 --> 00:09:44.640 Meanwhile, you might see agriculture

235 00:09:44.640 --> 00:09:46.380 or large scale investment

236 00:09:46.380 --> 00:09:48.780 in infrastructure being evaluated using

237 00:09:48.780 --> 00:09:50.433 say a cost benefit analysis.

238 00:09:52.860 --> 00:09:57.810 So zooming out to sort of the level that we often interact

239 00:09:59.878 --> 00:10:02.130 with these types of evaluations,

240 00:10:02.130 --> 00:10:05.370 say an aim three of your NIH proposal,

241 00:10:05.370 --> 00:10:09.390 depending of course on your desired evaluation type,

242 00:10:09.390 --> 00:10:10.710 you'll often wanna arrive

243 00:10:10.710 --> 00:10:12.720 at really a simple division problem.

244 00:10:12.720 --> 00:10:15.900 The cost of a program or policy or intervention

245 00:10:15.900 --> 00:10:18.450 divided by the outcome in question.

246 00:10:18.450 --> 00:10:20.100 For cost effectiveness analysis,

247 00:10:20.100 --> 00:10:22.830 the outcome is some measure of effectiveness,

248 00:10:22.830 --> 00:10:26.820 particularly a health outcome.

249 00:10:26.820 --> 00:10:29.460 For budget impact analysis and cost efficiency.

250 00:10:29.460 --> 00:10:31.530 This might be an intermediate outcome

251 00:10:31.530 --> 00:10:35.670 per person vaccinated or per patients served.

252 00:10:35.670 --> 00:10:36.660 But at its core,

253 00:10:36.660 --> 00:10:38.543 all the economic evaluations boil down

254 00:10:38.543 --> 00:10:40.920 to this simple division problem.

255 00:10:40.920 --> 00:10:43.350 And I wanna mention one more

256 00:10:43.350 --> 00:10:44.640 slightly more complicated

257 00:10:44.640 --> 00:10:46.560 but still simple division problem

258 00:10:46.560 --> 00:10:50.508 that you may have come across at some point, you know,

259 00:10:50.508 --> 00:10:54.330 in the process of of putting together a proposal.

260 00:10:54.330 --> 00:10:58.230 And that is one that builds very simply on the previous,

261 00:10:58.230 --> 00:11:00.750 and that's for cost effectiveness analysis

262 00:11:00.750 --> 00:11:02.760 that compares the cost effectiveness

263 00:11:02.760 --> 00:11:04.620 of the intervention and question

264 00:11:04.620 --> 00:11:06.030 to some particular alternative.

265 00:11:06.030 --> 00:11:08.190 So that's, that's the ICER.

266 00:11:08.190 --> 00:11:11.253 And this stands for incremental cost effectiveness ratio.

267 00:11:12.480 --> 00:11:14.910 So usually the comparator here is a status quo

268 00:11:14.910 --> 00:11:16.143 or a standard of care,

269 00:11:17.040 --> 00:11:20.683 but it might be some new alternative you're considering too.

270 00:11:20.683 --> 00:11:23.863 <v Person>That is very useful for developers.</v>

271 00:11:23.863 --> 00:11:26.520 <v ->I dunno if I'm getting a question here or not,</v>

272 00:11:26.520 --> 00:11:28.923 but I'll just continue about that.

273 00:11:30.360 --> 00:11:31.920 You can also use ICERs to compare

274 00:11:31.920 --> 00:11:33.060 between multiple different

275 00:11:33.060 --> 00:11:35.580 alternative interventions or configurations.

276 00:11:35.580 --> 00:11:38.430 You might end up with like a list of different interventions

277 00:11:38.430 --> 00:11:40.380 that you want to choose between

278 00:11:40.380 --> 00:11:44.580 using a process like a shopping spree scenario.

279 00:11:44.580 --> 00:11:45.930 I won't get into the details of that,

280 00:11:45.930 --> 00:11:47.010 but there's lots of different ways

281 00:11:47.010 --> 00:11:48.360 that you can use this tool.

282 00:11:51.840 --> 00:11:52.800 Lemme move on.

283 00:11:52.800 --> 00:11:53.850 In this talk though,

284 00:11:53.850 --> 00:11:55.650 I'm mostly concerned with the numerator.

285 00:11:55.650 --> 00:11:58.650 So how do we choose what counts and what doesn't count?

286 00:11:58.650 --> 00:12:00.630 What goes into the process of collecting data

287 00:12:00.630 --> 00:12:02.790 to inform these numbers

288 00:12:02.790 --> 00:12:04.530 and how might we begin to distinguish

289 00:12:04.530 --> 00:12:07.500 between studies that do that well or do that poorly?

290 00:12:07.500 --> 00:12:10.230 So I wanna get through a couple of key concepts here

291 00:12:10.230 --> 00:12:12.150 before we get started.

292 00:12:12.150 --> 00:12:15.090 And those are scarcity, opportunity costs,

293 00:12:15.090 --> 00:12:17.700 types of efficiency and perspective.

294 00:12:17.700 --> 00:12:20.460 And I'll linger on perspective a bit longer

295 00:12:20.460 --> 00:12:21.480 than the others.

296 00:12:21.480 --> 00:12:24.450 Scarcity is one of the most important concepts in economics

297 00:12:24.450 --> 00:12:27.480 and that's simply stated, resources are limited.

298 00:12:27.480 --> 00:12:29.940 So whether we have relatively more resources

299 00:12:29.940 --> 00:12:33.390 as within the US or say other OECD countries,

300 00:12:33.390 --> 00:12:35.040 or relatively fewer resources

301 00:12:35.040 --> 00:12:39.000 as many low and middle income countries find,

302 00:12:39.000 --> 00:12:41.970 there's always trade offs to be made in terms of investments

303 00:12:41.970 --> 00:12:44.040 and competing programs and activities.

304 00:12:44.040 --> 00:12:45.993 So it's a major consideration.

305 00:12:46.980 --> 00:12:49.650 The most powerful implication of the concept of scarcity

306 00:12:49.650 --> 00:12:51.630 is of course opportunity costs.

307 00:12:51.630 --> 00:12:55.050 So this refers to the simple truth that the use of resources

308 00:12:55.050 --> 00:12:58.410 for any one purpose precludes their use for another.

309 00:12:58.410 --> 00:13:01.440 And I have to say that opportunity cost is is a really great

310 00:13:01.440 --> 00:13:05.100 concept for focusing the mind by counteracting

311 00:13:05.100 --> 00:13:07.590 our own personal tendencies towards inertia,

312 00:13:07.590 --> 00:13:11.580 which is to say the tendency to say unthinkingly continue

313 00:13:11.580 --> 00:13:15.360 this year, what worked or what we did last year,

314 00:13:15.360 --> 00:13:16.193 or for that matter,

315 00:13:16.193 --> 00:13:18.960 what didn't work particularly well last year.

316 00:13:18.960 --> 00:13:21.810 So thinking about opportunity costs stimulates

317 00:13:21.810 --> 00:13:24.630 some creativity about the best use of resources

318 00:13:24.630 --> 00:13:28.590 given the needs and alternatives that exist.

319 00:13:28.590 --> 00:13:30.330 And the problem of resource allocation

320 00:13:30.330 --> 00:13:32.520 then becomes where can we get

321 00:13:32.520 --> 00:13:36.000 the greatest benefit for a given expenditure.

322 00:13:36.000 --> 00:13:38.400 And cost effectiveness analysis provides

323 00:13:38.400 --> 00:13:40.560 the sort of conceptual framework and methods

324 00:13:40.560 --> 00:13:42.902 to help make that determination.

325 00:13:42.902 --> 00:13:44.070 Efficiency.

326 00:13:44.070 --> 00:13:46.050 I'll just touch on briefly,

327 00:13:46.050 --> 00:13:47.250 there's two major types.

328 00:13:47.250 --> 00:13:48.270 Allocative efficiency,

329 00:13:48.270 --> 00:13:50.850 which con concerns the division of funds

330 00:13:50.850 --> 00:13:53.160 among different interventions.

331 00:13:53.160 --> 00:13:56.310 So HIV prevention versus treatment.

332 00:13:56.310 --> 00:13:59.010 This often involves complex choices,

333 00:13:59.010 --> 00:14:02.040 even if the health gains achievable in one area are greater

334 00:14:02.040 --> 00:14:04.950 than in another because costs also differ.

335 00:14:04.950 --> 00:14:06.510 And then there's technical efficiency,

336 00:14:06.510 --> 00:14:08.490 which is about how we implement an intervention

337 00:14:08.490 --> 00:14:10.290 that we've decided upon.

338 00:14:10.290 --> 00:14:11.280 So for example,

339 00:14:11.280 --> 00:14:13.710 what's the best program designed

340 00:14:13.710 --> 00:14:16.530 to deliver ARV therapy?

341 00:14:16.530 --> 00:14:19.530 Both kinds of efficiency require good cost data

342 00:14:19.530 --> 00:14:21.600 in order to properly assess them.

343 00:14:21.600 --> 00:14:24.210 However, technical efficiency is only about costs,

344 00:14:24.210 --> 00:14:25.530 whereas allocative efficiency

345 00:14:25.530 --> 00:14:28.293 concerns health impacts as well.

346 00:14:29.280 --> 00:14:30.357 And then finally, perspective,

347 00:14:30.357 --> 00:14:31.487 and I'll spend a little more time here

348 00:14:31.487 --> 00:14:33.900 'cause I think this is a really key thing

349 00:14:33.900 --> 00:14:37.230 that we all need to be on the same level with.

350 00:14:37.230 --> 00:14:39.993 This is perhaps the most important concept.

351 00:14:40.890 --> 00:14:42.180 So different stakeholders

352 00:14:42.180 --> 00:14:44.610 have different experiences of cost.

353 00:14:44.610 --> 00:14:46.170 There's the societal perspective,

354 00:14:46.170 --> 00:14:48.960 which is what we consider the most inclusive

355 00:14:48.960 --> 00:14:53.670 and is often recommended for most policy analyses

356 00:14:53.670 --> 00:14:55.420 in low and middle income countries.

357 00:14:56.610 --> 00:14:57.600 In this case,

358 00:14:57.600 --> 00:15:00.550 all costs are considered regardless of who incurs them

359 00:15:01.470 --> 00:15:02.940 within a society.

360 00:15:02.940 --> 00:15:05.790 However, considering the perspective

361 00:15:05.790 --> 00:15:09.270 of specific stakeholders is particularly useful

362 00:15:09.270 --> 00:15:12.810 in helping to address those stakeholder concerns.

363 00:15:12.810 --> 00:15:16.710 So will a payer or an insurance provider lose money

364 00:15:16.710 --> 00:15:19.980 even though a society gains in net savings?

365 00:15:19.980 --> 00:15:22.320 Or should we align financial incentives

366 00:15:22.320 --> 00:15:24.963 and how do we go about accomplishing that?

367 00:15:26.490 --> 00:15:28.560 So here's another sort of useful graphic

368 00:15:28.560 --> 00:15:30.000 for thinking about perspectives

369 00:15:30.000 --> 00:15:33.060 and in the context of a cost effectiveness analysis,

370 00:15:33.060 --> 00:15:35.100 these are the areas in which you might consider your choice

371 00:15:35.100 --> 00:15:36.870 of inputs for costs and benefits

372 00:15:36.870 --> 00:15:38.370 for a programmer intervention.

373 00:15:39.570 --> 00:15:43.080 So you'll see that in the rows of the table here.

374 00:15:43.080 --> 00:15:45.720 So many decision analyses are gonna be taking a societal

375 00:15:45.720 --> 00:15:47.763 perspective to start,

376 00:15:48.840 --> 00:15:51.870 but let's drill down a little bit more

377 00:15:51.870 --> 00:15:55.020 where we're talking about the hospital perspective

378 00:15:55.020 --> 00:15:56.700 or a payer perspective.

379 00:15:56.700 --> 00:16:00.303 So this is sort of the narrowest definition.

380 00:16:01.170 --> 00:16:03.480 They'll have their own particular interests

381 00:16:03.480 --> 00:16:05.520 and we can also think about this being done

382 00:16:05.520 --> 00:16:07.323 from the perspective of an employer,

383 00:16:08.340 --> 00:16:11.240 how we might think about the healthcare system as a whole.

384 00:16:12.300 --> 00:16:17.300 The next level out would be the payer perspective,

385 00:16:18.720 --> 00:16:22.140 and that captures the insurer

386 00:16:22.140 --> 00:16:24.690 and that that may be a government entity.

387 00:16:24.690 --> 00:16:26.373 So Medicare, Medicaid,

388 00:16:27.210 --> 00:16:30.090 and then zooming out even further

389 00:16:30.090 --> 00:16:32.010 the societal perspective.

390 00:16:32.010 --> 00:16:36.270 And that captures, you know, this broader range of costs.

391 00:16:36.270 --> 00:16:37.103 Okay?

392 00:16:40.140 --> 00:16:44.430 I wanna mention then the question arises,

393 00:16:44.430 --> 00:16:47.310 which of these perspectives should we choose?

394 00:16:47.310 --> 00:16:49.833 So in implementation science,

395 00:16:51.180 --> 00:16:56.180 it often depends on the priorities

396 00:16:56.874 --> 00:17:00.750 of the those on the ground partners

397 00:17:00.750 --> 00:17:02.400 and the institutions that you're working with

398 00:17:02.400 --> 00:17:05.220 when you roll out one of these studies.

399 00:17:05.220 --> 00:17:07.920 So in low and middle income country settings,

400 00:17:07.920 --> 00:17:12.660 the guidance from traditional reference case examples,

401 00:17:12.660 --> 00:17:14.940 and I'll touch on those in a bit,

402 00:17:14.940 --> 00:17:16.920 tend to encourage including

403 00:17:16.920 --> 00:17:19.590 this broader set of perspectives.

404 00:17:19.590 --> 00:17:20.730 So the societal

405 00:17:20.730 --> 00:17:22.380 or the health system perspective.

406 00:17:23.550 --> 00:17:25.320 However, narrower perspectives

407 00:17:25.320 --> 00:17:28.650 are usually these are more directed at the interests

408 00:17:28.650 --> 00:17:30.390 of key stakeholders,

409 00:17:30.390 --> 00:17:33.240 and that may be the number one priority

410 00:17:33.240 --> 00:17:37.350 in any one of these examples.

411 00:17:37.350 --> 00:17:38.910 So it really, you know,

412 00:17:38.910 --> 00:17:41.370 in short it really depends on the priorities

413 00:17:41.370 --> 00:17:43.720 of your partner agencies

414 00:17:44.670 --> 00:17:46.710 and those who are rolling out

415 00:17:46.710 --> 00:17:50.133 whatever this intervention happens to be.

416 00:17:51.420 --> 00:17:53.040 You know, there's a really great quote

417 00:17:53.040 --> 00:17:53.873 from this paper

418 00:17:53.873 --> 00:17:54.900 by Eisman and colleagues

419 00:17:54.900 --> 00:17:56.580 that just came out last year,

420 00:17:56.580 --> 00:17:58.807 and really it's a pragmatic answer.

421 00:17:58.807 --> 00:18:01.380 ”The perspective of the stakeholder and the decision makers

422 00:18:01.380 --> 00:18:03.570 who will be informed by the analysis

423 00:18:03.570 --> 00:18:05.880 should probably be prioritized.”

424 00:18:05.880 --> 00:18:09.810 But you can also conduct analysis at multiple levels,

425 00:18:09.810 --> 00:18:10.950 you know, as long as you're able

426 00:18:10.950 --> 00:18:13.200 to distinguish between those different levels

427 00:18:14.220 --> 00:18:15.390 when you write things up.

428 00:18:15.390 --> 00:18:18.570 So just keep in mind in this process,

429 00:18:18.570 --> 00:18:21.750 the organizations that are adopting evidence-based policies,

430 00:18:21.750 --> 00:18:23.850 they really need to know what it's gonna cost them

431 00:18:23.850 --> 00:18:26.103 in their setting, given their resources.

432 00:18:28.080 --> 00:18:29.310 But then there's a trade off

433 00:18:29.310 --> 00:18:31.740 and that is whose reality counts

434 00:18:31.740 --> 00:18:33.030 and whose being missed

435 00:18:33.030 --> 00:18:34.800 by these types of analyses?

436 00:18:34.800 --> 00:18:39.270 I don't know if those on the call have ever read anything

437 00:18:39.270 --> 00:18:41.280 by Robert Chambers, but you know,

438 00:18:41.280 --> 00:18:42.430 I think a lot about

439 00:18:44.250 --> 00:18:48.120 one of his early books, ”Whose Reality Counts,”

440 00:18:48.120 --> 00:18:49.470 when it comes to development interventions

441 00:18:49.470 --> 00:18:52.743 when I think about this idea of perspective.

442 00:18:55.050 --> 00:18:57.600 Another consideration that's closely related

443 00:18:57.600 --> 00:19:00.150 to perspective is timeframe.

444 00:19:00.150 --> 00:19:02.550 And so that is not just what costs and benefits

445 00:19:02.550 --> 00:19:05.160 should we collect, but like when and where

446 00:19:05.160 --> 00:19:07.290 in the project life cycle itself

447 00:19:07.290 --> 00:19:09.480 is it appropriate to collect 'em?

448 00:19:09.480 --> 00:19:11.520 So one option, you know, and we'll start

449 00:19:11.520 --> 00:19:13.170 with the first in that list there

450 00:19:13.170 --> 00:19:16.440 is to focus solely on the short term healthcare costs,

451 00:19:16.440 --> 00:19:18.750 which could include the costs of the intervention,

452 00:19:18.750 --> 00:19:22.110 costs of downstream stream healthcare.

453 00:19:22.110 --> 00:19:23.910 This approach is consistent with,

454 00:19:23.910 --> 00:19:24.743 I think, you know,

455 00:19:24.743 --> 00:19:27.600 most budget impact analyses, frameworks,

456 00:19:27.600 --> 00:19:29.970 particularly those mentioned

457 00:19:29.970 --> 00:19:32.580 in the CHEERS guidelines,

458 00:19:32.580 --> 00:19:35.610 which I'll provide some resources for later.

459 00:19:35.610 --> 00:19:37.770 And in the context of costing,

460 00:19:37.770 --> 00:19:40.770 this is usually on the order of about six months

461 00:19:40.770 --> 00:19:42.660 after a program's been implemented.

462 00:19:42.660 --> 00:19:45.990 So it's once that program is reached maturity,

463 00:19:45.990 --> 00:19:50.220 you know, what does it cost to continue to implement?

464 00:19:50.220 --> 00:19:52.200 But that ignores another set of questions,

465 00:19:52.200 --> 00:19:54.540 which is, you know, number two here,

466 00:19:54.540 --> 00:19:56.910 the intervention startup.

467 00:19:56.910 --> 00:19:58.440 And it might be extremely valuable,

468 00:19:58.440 --> 00:20:00.150 the organizations and key stakeholders

469 00:20:00.150 --> 00:20:01.080 who are carrying out

470 00:20:01.080 --> 00:20:03.510 that evidence-based program

471 00:20:03.510 --> 00:20:04.830 to include these costs

472 00:20:04.830 --> 00:20:07.080 in order to capture some sense

473 00:20:07.080 --> 00:20:08.520 of what it would take for a system

474 00:20:08.520 --> 00:20:10.200 to start to integrate new practices,

475 00:20:10.200 --> 00:20:11.424 how long it might take

476 00:20:11.424 --> 00:20:14.223 for those systems to reach maturity.

477 00:20:15.360 --> 00:20:16.193 Another option,

478 00:20:16.193 --> 00:20:18.030 the third in that list

479 00:20:18.030 --> 00:20:20.640 is to include additional research costs,

480 00:20:20.640 --> 00:20:23.752 research costs included in the design and development

481 00:20:23.752 --> 00:20:28.380 of implementing a new evidence-based practice.

482 00:20:28.380 --> 00:20:32.640 So that might be adapting that evidence-based practice

483 00:20:32.640 --> 00:20:34.800 to a local setting or an intervention.

484 00:20:34.800 --> 00:20:38.707 And it could also include some of the costs of say,

485 00:20:40.800 --> 00:20:42.360 monitoring and getting feedback

486 00:20:42.360 --> 00:20:43.860 from participants in order

487 00:20:43.860 --> 00:20:48.780 to adapt and to improve,

488 00:20:48.780 --> 00:20:51.810 I guess the implementation of that process.

489 00:20:51.810 --> 00:20:52.643 And then finally,

490 00:20:52.643 --> 00:20:53.476 there's this question

491 00:20:53.476 --> 00:20:55.290 of future downstream costs and benefits.

492 00:20:55.290 --> 00:20:56.790 And that's particularly to patients

493 00:20:56.790 --> 00:20:58.170 and to program beneficiaries.

494 00:20:58.170 --> 00:21:01.050 So that's number four in the image that you see.

495 00:21:01.050 --> 00:21:03.360 And this is often included, you know,

496 00:21:03.360 --> 00:21:04.193 as I mentioned before,

497 00:21:04.193 --> 00:21:05.280 in perspectives that are taken

498 00:21:05.280 --> 00:21:06.513 from the societal level,

499 00:21:07.530 --> 00:21:11.580 but all too often they fall outside

500 00:21:11.580 --> 00:21:13.500 of the scope of interest

501 00:21:13.500 --> 00:21:14.850 for implementing partners

502 00:21:14.850 --> 00:21:16.650 and particularly for payers.

503 00:21:16.650 --> 00:21:17.520 You know, and I'll just mention

504 00:21:17.520 --> 00:21:21.210 that this is one of the main major downsides to many,

505 00:21:21.210 --> 00:21:23.700 if not most economic evaluations

506 00:21:23.700 --> 00:21:25.380 that are conducted domestically.

507 00:21:25.380 --> 00:21:26.370 So when it, you know,

508 00:21:26.370 --> 00:21:27.750 this is a setting where the payer

509 00:21:27.750 --> 00:21:30.780 is often a private health insurer who has no monetary stake

510 00:21:30.780 --> 00:21:32.340 in the future health state

511 00:21:32.340 --> 00:21:34.140 of their clients because

512 00:21:34.140 --> 00:21:38.640 in most cases those customers might age out

513 00:21:38.640 --> 00:21:40.200 and move into a new health insurer,

514 00:21:40.200 --> 00:21:42.783 so Medicare, for example, when you turn 65.

515 00:21:43.920 --> 00:21:46.470 So I'll just mention that an analyst may choose

516 00:21:46.470 --> 00:21:48.600 to include any number of these different components

517 00:21:48.600 --> 00:21:50.700 of an intervention or these different parts

518 00:21:50.700 --> 00:21:51.900 of the timeframe.

519 00:21:51.900 --> 00:21:52.733 But in any case,

520 00:21:52.733 --> 00:21:54.870 it's really essential to be able to distinguish

521 00:21:54.870 --> 00:21:56.850 between these different sets of costs and benefits

522 00:21:56.850 --> 00:21:59.610 and to be explicit about the scope,

523 00:21:59.610 --> 00:22:01.830 particularly for generalizability

524 00:22:01.830 --> 00:22:03.393 and understanding limitations.

525 00:22:05.130 --> 00:22:06.870 So lemme go into costs and costing,

526 00:22:06.870 --> 00:22:09.660 I've kinda droned on for a long time here,

527 00:22:09.660 --> 00:22:12.693 but let's talk about what costs are.

528 00:22:14.820 --> 00:22:15.930 So there's definitely,

529 00:22:15.930 --> 00:22:19.080 there's many different sources of costs

530 00:22:19.080 --> 00:22:21.390 from donors and government providers,

531 00:22:21.390 --> 00:22:23.070 international and local NGOs,

532 00:22:23.070 --> 00:22:25.773 participant costs from households and individuals.

533 00:22:26.670 --> 00:22:28.710 There's also many different ways to describe

534 00:22:28.710 --> 00:22:30.303 and categorize costs,

535 00:22:31.410 --> 00:22:32.607 say by the type of costs.

536 00:22:32.607 --> 00:22:35.360 Are they real world costs or are they costs

537 00:22:35.360 --> 00:22:37.440 of a randomized control trial?

538 00:22:37.440 --> 00:22:39.123 Are they full or incremental?

539 00:22:40.560 --> 00:22:42.930 Or by cost categories,

540 00:22:42.930 --> 00:22:44.970 so different types of inputs

541 00:22:44.970 --> 00:22:46.443 or organized by activities.

542 00:22:47.589 --> 00:22:50.243 Or, you know, as I mentioned even by the timing of costs.

543 00:22:51.810 --> 00:22:53.490 If you remember my first major takeaway

544 00:22:53.490 --> 00:22:54.750 from the presentation,

545 00:22:54.750 --> 00:22:56.160 you should be starting to get an idea

546 00:22:56.160 --> 00:22:56.993 of why I say

547 00:22:56.993 --> 00:22:59.763 that there was my second takeaway, rather,

548 00:23:00.780 --> 00:23:02.550 you start to get an idea here

549 00:23:02.550 --> 00:23:05.850 of the notion that expenditures exist,

550 00:23:05.850 --> 00:23:07.200 but that costs,

551 00:23:07.200 --> 00:23:08.760 they're a little bit fuzzier.

552 00:23:08.760 --> 00:23:10.380 They're frequently abstract

553 00:23:10.380 --> 00:23:12.680 and they depend on a lot of different factors.

554 00:23:13.950 --> 00:23:17.310 So two different kinds of costs to be able

555 00:23:17.310 --> 00:23:21.540 to distinguish between are economic and financial costs.

556 00:23:21.540 --> 00:23:25.230 So financial costs are those appearing potentially

557 00:23:25.230 --> 00:23:29.610 in the program expenditures documents.

558 00:23:29.610 --> 00:23:33.090 Meanwhile, economic costs are costs

559 00:23:33.090 --> 00:23:34.980 that are included or that include

560 00:23:34.980 --> 00:23:36.900 the value of all resources,

561 00:23:36.900 --> 00:23:38.160 regardless of who's paying.

562 00:23:38.160 --> 00:23:42.090 So the difference here is resources contributed

563 00:23:42.090 --> 00:23:42.990 by other entities.

564 00:23:42.990 --> 00:23:45.600 So for example, the local hospital,

565 00:23:45.600 --> 00:23:47.430 the clinical staff,

566 00:23:47.430 --> 00:23:50.610 volunteers or subsidized costs,

567 00:23:50.610 --> 00:23:55.233 such as from an international agency paying for commodities.

568 00:23:56.400 --> 00:24:01.200 So note that when you see an economic costing exercise

569 00:24:01.200 --> 00:24:03.270 referred to in the literature,

570 00:24:03.270 --> 00:24:06.365 it typically subsumes financial costing

571 00:24:06.365 --> 00:24:11.043 when it's, you know, thought of in this Venn diagram.

572 00:24:13.260 --> 00:24:15.720 So we have a sense of what costs are

573 00:24:15.720 --> 00:24:16.740 and why they're important,

574 00:24:16.740 --> 00:24:19.410 but what exactly is costing.

575 00:24:19.410 --> 00:24:22.397 So we use this term costing as a shorthand

576 00:24:22.397 --> 00:24:25.230 to describe the estimation of the costs

577 00:24:25.230 --> 00:24:29.220 of producing health services, for example.

578 00:24:29.220 --> 00:24:32.400 So costing places of value on the total resources used

579 00:24:32.400 --> 00:24:34.140 to produce a good or service.

580 00:24:34.140 --> 00:24:37.380 It requires measurement of the amount of each resource

581 00:24:37.380 --> 00:24:39.480 as well as information about the price

582 00:24:39.480 --> 00:24:41.640 of each of those resources.

583 00:24:41.640 --> 00:24:44.520 So costs can vary by context.

584 00:24:44.520 --> 00:24:47.670 So when one is costing,

585 00:24:47.670 --> 00:24:50.160 it's important to gather information about location,

586 00:24:50.160 --> 00:24:53.823 about time period, population, and a host of other factors.

587 00:24:54.990 --> 00:24:56.670 Some of the different types of resources

588 00:24:56.670 --> 00:24:59.250 that are used to produce health services

589 00:24:59.250 --> 00:25:02.640 might include human resources,

590 00:25:02.640 --> 00:25:04.470 drugs and supplies,

591 00:25:04.470 --> 00:25:07.710 medical or other non-medical equipment

592 00:25:07.710 --> 00:25:09.213 or even patient costs.

593 00:25:10.380 --> 00:25:12.393 So what exactly do we use costing for?

594 00:25:13.260 --> 00:25:14.220 Well, costing is used

595 00:25:14.220 --> 00:25:18.450 in a range of research evaluations, programs,

596 00:25:18.450 --> 00:25:19.950 and in planning,

597 00:25:19.950 --> 00:25:22.680 primarily it's in the areas of financial planning

598 00:25:22.680 --> 00:25:24.900 and budgeting and priority setting

599 00:25:24.900 --> 00:25:28.833 that cost data is the most sort of visible we'll say.

600 00:25:29.670 --> 00:25:30.503 So for example,

601 00:25:30.503 --> 00:25:33.960 cost data are used to evaluate the effectiveness

602 00:25:33.960 --> 00:25:36.150 of an intervention or to understand

603 00:25:36.150 --> 00:25:38.550 the efficiency of health delivery,

604 00:25:38.550 --> 00:25:40.000 but what are the cost drivers

605 00:25:40.890 --> 00:25:42.570 and how do these vary over time?

606 00:25:42.570 --> 00:25:44.160 So in in ART,

607 00:25:44.160 --> 00:25:46.983 which is the example in the slide here,

608 00:25:47.940 --> 00:25:50.700 this figure is from a systematic review

609 00:25:50.700 --> 00:25:52.163 of the costing literature.

610 00:25:52.163 --> 00:25:54.390 This is one that I'll touch on later

611 00:25:54.390 --> 00:25:55.920 for antiretroviral treatment

612 00:25:55.920 --> 00:25:57.670 in low and middle income countries,

613 00:25:58.590 --> 00:26:00.750 it shows the different drivers

614 00:26:00.750 --> 00:26:04.893 of the average unit costs across five different settings.

615 00:26:05.910 --> 00:26:07.470 And this helps to show

616 00:26:07.470 --> 00:26:11.940 which cost inputs contribute most to the overall unit cost.

617 00:26:11.940 --> 00:26:13.080 So this figure I think does

618 00:26:13.080 --> 00:26:16.260 a really great job of showing the absolute difference

619 00:26:16.260 --> 00:26:18.450 in unit costs between settings.

620 00:26:18.450 --> 00:26:20.340 And in this case it's it's by country

621 00:26:20.340 --> 00:26:22.140 and it includes a lot of different settings

622 00:26:22.140 --> 00:26:27.140 within countries and doing so over time.

623 00:26:28.260 --> 00:26:29.103 Oops, excuse me.

624 00:26:33.690 --> 00:26:35.850 So cost data are also used, you know,

625 00:26:35.850 --> 00:26:38.550 as I mentioned in efficiency analyses.

626 00:26:38.550 --> 00:26:39.383 So for example,

627 00:26:39.383 --> 00:26:42.570 this might be to examine how costs vary

628 00:26:42.570 --> 00:26:45.120 with different levels of service delivery.

629 00:26:45.120 --> 00:26:48.900 So understanding unit costs at different coverage levels

630 00:26:48.900 --> 00:26:51.960 is really important to predicting costs as programs tend

631 00:26:51.960 --> 00:26:53.580 to scale up or to grow.

632 00:26:53.580 --> 00:26:57.120 So scale is a really important component here.

633 00:26:57.120 --> 00:27:00.000 Now these dynamics can be explored

634 00:27:00.000 --> 00:27:01.830 through the use of cost functions.

635 00:27:01.830 --> 00:27:03.630 So here the figure shows

636 00:27:03.630 --> 00:27:06.180 this sort of interesting dynamic relationship

637 00:27:06.180 --> 00:27:10.230 between scale and unit cost for antiretroviral treatments

638 00:27:10.230 --> 00:27:11.670 across a large number of sites

639 00:27:11.670 --> 00:27:13.950 in sub-Saharan African countries.

640 00:27:13.950 --> 00:27:17.910 So you'll note that the relationship here isn't linear.

641 00:27:17.910 --> 00:27:19.380 It's a little noisy,

642 00:27:19.380 --> 00:27:21.990 but that makes it important to estimate cost functions

643 00:27:21.990 --> 00:27:24.120 and then to utilize different costs

644 00:27:24.120 --> 00:27:26.160 for different levels of coverage.

645 00:27:26.160 --> 00:27:28.350 So in this case we can see

646 00:27:28.350 --> 00:27:31.620 some suggestive evidence of economies of scale,

647 00:27:31.620 --> 00:27:36.060 which is to say that per patient ART services

648 00:27:36.060 --> 00:27:38.970 within facilities with larger numbers

649 00:27:38.970 --> 00:27:40.170 of annual patients tend

650 00:27:40.170 --> 00:27:42.450 to be slightly cheaper than facilities

651 00:27:42.450 --> 00:27:44.073 with fewer annual patients.

652 00:27:45.930 --> 00:27:48.210 So one thing to remember here

653 00:27:48.210 --> 00:27:50.130 is that although there's a wide range

654 00:27:50.130 --> 00:27:52.350 of different analyses that need cost data,

655 00:27:52.350 --> 00:27:57.350 they don't always use or need the same types of data.

656 00:27:57.690 --> 00:27:59.370 The purpose of the analysis

657 00:27:59.370 --> 00:28:01.440 in this case sort of dictates

658 00:28:01.440 --> 00:28:03.300 the type of cost that is required.

659 00:28:03.300 --> 00:28:04.780 And so it's really important

660 00:28:05.640 --> 00:28:08.163 that the purpose be identified at the outset.

661 00:28:09.510 --> 00:28:10.650 So, you know,

662 00:28:10.650 --> 00:28:13.950 we have to consider budgeting, forecasting,

663 00:28:13.950 --> 00:28:18.060 efficiency analysis, priority setting, among others.

664 00:28:20.641 --> 00:28:22.200 Move forward.

665 00:28:22.200 --> 00:28:24.630 So before we go into costs further,

666 00:28:24.630 --> 00:28:27.530 I think it's also important to get some terminology right.

667 00:28:28.710 --> 00:28:31.710 In addition to the types of costs,

668 00:28:31.710 --> 00:28:34.020 there's also different measures of cost.

669 00:28:34.020 --> 00:28:36.633 So being clear about what each means, I think,

670 00:28:37.470 --> 00:28:40.710 is pretty central to understanding

671 00:28:40.710 --> 00:28:44.340 and interpreting cost information better as a field.

672 00:28:44.340 --> 00:28:46.140 So here are four different types

673 00:28:46.140 --> 00:28:49.170 of costing terms that you're probably familiar with

674 00:28:49.170 --> 00:28:51.960 or, you know, you may have encountered some,

675 00:28:51.960 --> 00:28:53.370 but what do they mean?

676 00:28:53.370 --> 00:28:55.470 So the first is total cost,

677 00:28:55.470 --> 00:28:57.900 which is as you'd imagine the total cost

678 00:28:57.900 --> 00:28:59.073 of producing a service.

679 00:29:00.030 --> 00:29:03.330 And in healthcare this is often presented as an annual cost.

680 00:29:03.330 --> 00:29:07.237 For example, the total annual cost of VMMC services

681 00:29:07.237 --> 00:29:09.813 at a clinic in a particular setting.

682 00:29:11.040 --> 00:29:13.530 The second term is average unit cost.

683 00:29:13.530 --> 00:29:16.860 And so this is the total cost per unit of output.

684 00:29:16.860 --> 00:29:18.840 And you'll notice that the units of output

685 00:29:18.840 --> 00:29:20.540 can be measured in different ways,

686 00:29:21.480 --> 00:29:22.800 even within the same service.

687 00:29:22.800 --> 00:29:23.820 So for example,

688 00:29:23.820 --> 00:29:25.950 there's a cost per person contacted

689 00:29:25.950 --> 00:29:27.900 or a cost per person treated.

690 00:29:27.900 --> 00:29:30.540 And I'll return to this a little later.

691 00:29:30.540 --> 00:29:32.460 The third term is marginal cost,

692 00:29:32.460 --> 00:29:35.490 which is a concept that's frequently used in economics

693 00:29:35.490 --> 00:29:38.246 and it's really critical to efficiency analysis.

694 00:29:38.246 --> 00:29:40.020 And this is the additional cost of producing

695 00:29:40.020 --> 00:29:41.880 just one more unit of output.

696 00:29:41.880 --> 00:29:43.557 So for example,

697 00:29:43.557 --> 00:29:45.870 the cost of testing one more person

698 00:29:45.870 --> 00:29:48.033 or vaccinating one additional patient.

699 00:29:49.140 --> 00:29:52.530 And then the final term here is incremental cost,

700 00:29:52.530 --> 00:29:54.840 which also examines change.

701 00:29:54.840 --> 00:29:57.690 In this case, however, the focus is on the cost

702 00:29:57.690 --> 00:29:59.190 of adding a completely new level

703 00:29:59.190 --> 00:30:00.360 or type of service rather

704 00:30:00.360 --> 00:30:02.820 than adding one more unit of output

705 00:30:02.820 --> 00:30:04.320 to an existing service.

706 00:30:04.320 --> 00:30:05.190 So for example,

707 00:30:05.190 --> 00:30:08.070 the additional cost of adding counseling

708 00:30:08.070 --> 00:30:09.210 and linkage to care

709 00:30:09.210 --> 00:30:10.653 to current HIV testing.

710 00:30:12.180 --> 00:30:15.810 Most costing exercises though that you'll encounter tend to

711 00:30:15.810 --> 00:30:18.423 refer to either average or to unit costs.

712 00:30:21.009 --> 00:30:23.070 I wanna give you just a quick example here

713 00:30:23.070 --> 00:30:26.970 of what a program costing table might look like.

714 00:30:26.970 --> 00:30:30.960 So this slide comes from a presentation by Dr. Jim Kahn,

715 00:30:30.960 --> 00:30:35.940 who is a mentor of mine at Cal.

716 00:30:35.940 --> 00:30:40.860 The example here is a small rural HIV clinic

717 00:30:40.860 --> 00:30:45.860 that was set up by a colleague of Dr. Khan at UCSF,

718 00:30:45.990 --> 00:30:46.920 which I'll have to say

719 00:30:46.920 --> 00:30:51.030 is where he spent most of his career.

720 00:30:51.030 --> 00:30:54.720 And the two in this case conducted

721 00:30:54.720 --> 00:30:57.600 a costing analysis of this facility.

722 00:30:57.600 --> 00:30:58.433 So as you can see,

723 00:30:58.433 --> 00:31:00.000 the summary divides costs

724 00:31:00.000 --> 00:31:02.160 into four different categories.

725 00:31:02.160 --> 00:31:03.723 There's personnel at the top,

726 00:31:04.620 --> 00:31:06.210 antiretroviral medications,

727 00:31:06.210 --> 00:31:07.800 which are the dominant supply

728 00:31:07.800 --> 00:31:09.300 that were used by the program,

729 00:31:10.260 --> 00:31:14.040 lab tests, which is the main service that was provided

730 00:31:14.040 --> 00:31:15.300 by the program,

731 00:31:15.300 --> 00:31:18.420 and then there's this fourth sort of residual category

732 00:31:18.420 --> 00:31:20.190 of less expensive items.

733 00:31:20.190 --> 00:31:23.340 So administration, general supplies,

734 00:31:23.340 --> 00:31:25.890 vehicles, storage, utilities.

735 00:31:25.890 --> 00:31:27.440 You might find pencils in here.

736 00:31:28.740 --> 00:31:31.320 So the standard input categories here

737 00:31:31.320 --> 00:31:32.490 were adapted to conform

738 00:31:32.490 --> 00:31:35.460 to how clinicians think about major components

739 00:31:35.460 --> 00:31:36.963 of antiretroviral treatment.

740 00:31:37.800 --> 00:31:39.630 In this case, the columns show the units

741 00:31:39.630 --> 00:31:41.250 that were tested,

742 00:31:41.250 --> 00:31:44.040 the costs per unit,

743 00:31:44.040 --> 00:31:47.460 the resulting monthly cost for the entire activity

744 00:31:47.460 --> 00:31:50.340 and the entire costs per patient

745 00:31:50.340 --> 00:31:51.333 for each line item.

746 00:31:52.320 --> 00:31:53.700 So in this case, for example,

747 00:31:53.700 --> 00:31:58.290 the full-time doctor costs $1083 per month

748 00:31:58.290 --> 00:32:00.453 and $52 per patient year.

749 00:32:02.400 --> 00:32:04.110 So one interesting takeaway here

750 00:32:04.110 --> 00:32:06.030 is that the authors found

751 00:32:06.030 --> 00:32:09.660 that once the clinic had reached fully operational capacity,

752 00:32:09.660 --> 00:32:11.580 it was able to deliver an ART

753 00:32:11.580 --> 00:32:16.110 at it looks like about $550 per patient per year.

754 00:32:16.110 --> 00:32:18.330 And they also found, which isn't shown here,

755 00:32:18.330 --> 00:32:21.180 that the cost could drop by about a third

756 00:32:21.180 --> 00:32:23.580 with less expensive medications

757 00:32:23.580 --> 00:32:25.320 as well as lower wage scales

758 00:32:25.320 --> 00:32:27.990 and modest increases in patient load.

759 00:32:27.990 --> 00:32:29.490 So just an interesting example

760 00:32:30.750 --> 00:32:32.853 to kind of put some of this into context.

761 00:32:34.290 --> 00:32:36.810 A couple of key costing principles here.

762 00:32:36.810 --> 00:32:38.220 And these are major takeaways

763 00:32:38.220 --> 00:32:40.980 I think from Jim as well.

764 00:32:40.980 --> 00:32:44.610 But in theory you can do some really solid costing work

765 00:32:44.610 --> 00:32:48.420 if you adhere to really these three main principles.

766 00:32:48.420 --> 00:32:50.100 So the most important is that your goal

767 00:32:50.100 --> 00:32:52.440 is to quantify the resources required

768 00:32:52.440 --> 00:32:55.530 for program operation and the associated cost,

769 00:32:55.530 --> 00:32:59.880 and that means developing an inventory of resources

770 00:32:59.880 --> 00:33:01.590 and assigning appropriate costs.

771 00:33:01.590 --> 00:33:05.040 So this task is quite different

772 00:33:05.040 --> 00:33:07.080 than simply accepting a program's budget

773 00:33:07.080 --> 00:33:08.970 or their expenditure report

774 00:33:08.970 --> 00:33:10.650 because that report might include costs

775 00:33:10.650 --> 00:33:13.350 that aren't required for routine program operations,

776 00:33:13.350 --> 00:33:15.483 like special evaluation needs of a funder.

777 00:33:17.400 --> 00:33:19.980 Also, even if the costs are accurate,

778 00:33:19.980 --> 00:33:21.330 you've likely learned nothing

779 00:33:21.330 --> 00:33:23.160 about how the program operates.

780 00:33:23.160 --> 00:33:26.010 So specifically, what types of inputs might be available?

781 00:33:27.450 --> 00:33:29.220 The number two point, you know,

782 00:33:29.220 --> 00:33:33.390 that Jim makes often is that you should be systematic

783 00:33:33.390 --> 00:33:35.130 and thoughtfully thorough.

784 00:33:35.130 --> 00:33:37.950 And by systematic, you know, we mean

785 00:33:37.950 --> 00:33:39.630 that the search for resources

786 00:33:39.630 --> 00:33:42.240 should include all of the usual input categories

787 00:33:42.240 --> 00:33:43.803 like personnel and equipment,

788 00:33:44.790 --> 00:33:46.740 the range of activities, such as marketing

789 00:33:46.740 --> 00:33:47.793 and service delivery.

790 00:33:48.840 --> 00:33:52.620 But, by being thoughtfully thorough, you know,

791 00:33:52.620 --> 00:33:56.580 what Jim refers to is that all of the significant resources

792 00:33:56.580 --> 00:34:00.150 should be included, quantified and costed.

793 00:34:00.150 --> 00:34:01.800 But minor costs,

794 00:34:01.800 --> 00:34:05.220 truly minor things like routine stationary supplies

795 00:34:05.220 --> 00:34:09.570 or routine services, pencils and erasers,

796 00:34:09.570 --> 00:34:13.170 they can often be safely ignored if the data collection

797 00:34:13.170 --> 00:34:16.200 in order to obtain those is too onerous.

798 00:34:16.200 --> 00:34:18.780 So of course that's like a judgment call.

799 00:34:18.780 --> 00:34:21.120 And one suggestion, you know,

800 00:34:21.120 --> 00:34:24.240 that Jim makes is to use a table

801 00:34:24.240 --> 00:34:25.860 and kind of order resources

802 00:34:25.860 --> 00:34:27.510 from the most to the least expensive

803 00:34:27.510 --> 00:34:29.850 so that you can empirically identify,

804 00:34:29.850 --> 00:34:32.610 say a cutoff for each of the resources

805 00:34:32.610 --> 00:34:34.770 that are considered maybe too minor

806 00:34:34.770 --> 00:34:38.850 or that may not play into the overall costs

807 00:34:38.850 --> 00:34:40.620 as much as you might be concerned about.

808 00:34:40.620 --> 00:34:44.070 So, you know, this is really getting into fine, fine detail.

809 00:34:44.070 --> 00:34:46.270 Do you really need to cost that last pencil?

810 00:34:47.940 --> 00:34:50.700 And then finally, you know, as we mentioned before,

811 00:34:50.700 --> 00:34:52.740 adopt the appropriate perspective.

812 00:34:52.740 --> 00:34:56.103 So I've talked about, you know, this at some length,

813 00:34:58.320 --> 00:34:59.670 but it's worth reiterating.

814 00:35:03.750 --> 00:35:06.480 I'll go over, I think I might skip past some

815 00:35:06.480 --> 00:35:10.380 of the typical cost and categories except to say, you know,

816 00:35:10.380 --> 00:35:13.620 these are some examples they may often

817 00:35:13.620 --> 00:35:16.023 go as far as to include patient costs.

818 00:35:18.030 --> 00:35:23.030 They may also vary by program and over time.

819 00:35:26.100 --> 00:35:29.340 The timeframe, you know, which I mentioned earlier,

820 00:35:29.340 --> 00:35:32.220 typically when we think about a costing exercise,

821 00:35:32.220 --> 00:35:35.670 it's about 12 months or it's multiples thereof.

822 00:35:35.670 --> 00:35:37.170 And you know, the reason for this

823 00:35:37.170 --> 00:35:38.400 for annual costing

824 00:35:38.400 --> 00:35:41.940 is that it has the hallmark of, you know,

825 00:35:41.940 --> 00:35:45.000 conforming to our pervasive and programmatic record keeping,

826 00:35:45.000 --> 00:35:46.470 which is really nice,

827 00:35:46.470 --> 00:35:49.500 but it can also help to deal with distortions,

828 00:35:49.500 --> 00:35:51.420 seasonal effects and shocks.

829 00:35:51.420 --> 00:35:54.180 It's smooths as a lot of random variation.

830 00:35:54.180 --> 00:35:56.010 So that can be for like the calendar year

831 00:35:56.010 --> 00:35:57.510 or the fiscal year, typically.

832 00:35:58.620 --> 00:36:00.510 Portraying costs by month,

833 00:36:00.510 --> 00:36:01.343 if it's easier,

834 00:36:01.343 --> 00:36:04.050 might indicate how costs vary over the course of a year.

835 00:36:04.050 --> 00:36:05.650 So that's another consideration.

836 00:36:07.470 --> 00:36:08.730 And you know, again,

837 00:36:08.730 --> 00:36:12.000 if we're talking about fully operational programs,

838 00:36:12.000 --> 00:36:15.780 we wanna make sure that the program is actually matured,

839 00:36:15.780 --> 00:36:18.910 but again, that might ignore some of the startup costs

840 00:36:20.210 --> 00:36:22.353 or other costs that I discussed earlier.

841 00:36:23.340 --> 00:36:26.640 One other little piece of terminology that I want to cover

842 00:36:26.640 --> 00:36:29.640 is gross versus macro, and top down versus bottom up.

843 00:36:29.640 --> 00:36:32.010 So you might have come across this a number of times,

844 00:36:32.010 --> 00:36:33.990 you know, in proposals or mentioned

845 00:36:33.990 --> 00:36:35.740 sort of casually in the literature,

846 00:36:36.600 --> 00:36:39.840 micro-costing focuses on really granular accounting

847 00:36:39.840 --> 00:36:44.840 of inputs as opposed to to macro-costing,

848 00:36:45.420 --> 00:36:50.420 which is, or sorry, gross costing.

849 00:36:50.430 --> 00:36:51.780 I always get them confused.

850 00:36:52.852 --> 00:36:54.930 A gross costing approach that might simply estimate

851 00:36:54.930 --> 00:36:56.790 all of the relevant costs,

852 00:36:56.790 --> 00:36:59.250 typically from program expenditure data,

853 00:36:59.250 --> 00:37:02.070 and then dividing the associated outputs.

854 00:37:02.070 --> 00:37:04.083 So like patient episodes.

855 00:37:05.280 --> 00:37:08.250 In contrast, we've got the bottom up or top down,

856 00:37:08.250 --> 00:37:12.390 which refers to the way in which each resource is allocated

857 00:37:12.390 --> 00:37:14.280 to the total unit cost being estimated.

858 00:37:14.280 --> 00:37:17.370 So top down costing divides

859 00:37:17.370 --> 00:37:19.680 overall program costs or expenditures,

860 00:37:19.680 --> 00:37:21.780 often including those,

861 00:37:21.780 --> 00:37:26.780 which are above the service delivery level

862 00:37:26.820 --> 00:37:28.290 by the number of outputs in order

863 00:37:28.290 --> 00:37:29.943 to calculate the unit cost,

864 00:37:30.870 --> 00:37:33.180 whereas bottom up costing

865 00:37:33.180 --> 00:37:37.500 measures input quantities at the client or activity level.

866 00:37:37.500 --> 00:37:39.390 So gross costing, for example,

867 00:37:39.390 --> 00:37:42.183 is commonly done top down, for example.

868 00:37:44.640 --> 00:37:46.990 And then micro-costing kind of has a bottom up.

869 00:37:49.590 --> 00:37:50.760 I'll skip over.

870 00:37:50.760 --> 00:37:55.323 Well, let's see, Debbie, we're at 43 after.

871 00:37:57.300 --> 00:38:00.750 I wanna mention pricing and valuation very briefly

872 00:38:00.750 --> 00:38:04.830 before moving into some of our other findings

873 00:38:04.830 --> 00:38:09.300 simply because I think there's one example

874 00:38:09.300 --> 00:38:11.640 in the popular press right now

875 00:38:11.640 --> 00:38:13.170 that's really worth consideration,

876 00:38:13.170 --> 00:38:14.610 particularly if you're operating

877 00:38:14.610 --> 00:38:15.840 in low and middle income countries.

878 00:38:15.840 --> 00:38:20.840 And I'll just point to the fourth bullet here, inflation.

879 00:38:20.970 --> 00:38:22.780 So inflation comes up a lot

880 00:38:24.600 --> 00:38:25.650 in the popular press

881 00:38:25.650 --> 00:38:27.750 because we're experiencing rapid inflation

882 00:38:27.750 --> 00:38:28.983 in the US right now,

883 00:38:29.850 --> 00:38:33.960 but I wanna linger on it for a second, simply to say,

884 00:38:33.960 --> 00:38:38.960 so the operation that you use

885 00:38:40.020 --> 00:38:43.020 in order to account for inflation

886 00:38:43.020 --> 00:38:46.620 in different country settings matters a great deal.

887 00:38:46.620 --> 00:38:48.270 So the example here is,

888 00:38:48.270 --> 00:38:49.820 let's say that you've collected

889 00:38:50.915 --> 00:38:51.748 a piece of critical cost data

890 00:38:51.748 --> 00:38:53.610 from a program in Tanzania,

891 00:38:53.610 --> 00:38:55.433 the unit cost of a service

892 00:38:55.433 --> 00:38:58.353 in the year 2000 to say a $100.

893 00:38:59.400 --> 00:39:02.040 So, you know, the typical strategy

894 00:39:02.040 --> 00:39:07.040 is to use a US price inflation tool,

895 00:39:08.220 --> 00:39:10.720 so typically the GDP price deflator

896 00:39:11.700 --> 00:39:15.300 and convert that into US dollars

897 00:39:15.300 --> 00:39:17.820 in order to inflate over time.

898 00:39:17.820 --> 00:39:21.390 There's some recommendations in the literature

899 00:39:21.390 --> 00:39:22.223 that this should be done

900 00:39:22.223 --> 00:39:24.150 in a different order of operations,

901 00:39:24.150 --> 00:39:26.420 and that would be to actually inflate

902 00:39:26.420 --> 00:39:30.720 in local inflation before converting into US dollars.

903 00:39:30.720 --> 00:39:32.010 And the implications for that.

904 00:39:32.010 --> 00:39:35.700 So in the next slide here are pretty substantial.

905 00:39:35.700 --> 00:39:38.850 So, you know, in Tanzania over that same period,

906 00:39:38.850 --> 00:39:42.630 inflation was quite rampant and so it it really changes

907 00:39:42.630 --> 00:39:45.900 the overall dollar amount

908 00:39:45.900 --> 00:39:46.860 that you're looking at

909 00:39:46.860 --> 00:39:49.770 in the last period of the cycle there.

910 00:39:49.770 --> 00:39:51.720 And it's even more volatile

911 00:39:51.720 --> 00:39:53.550 when you include other countries

912 00:39:53.550 --> 00:39:55.653 in sub-Saharan Africa, period.

913 00:39:57.180 --> 00:40:02.180 So, your choice of inflating first before exchanging

914 00:40:02.340 --> 00:40:04.830 into US dollars or exchanging into US dollars

915 00:40:04.830 --> 00:40:07.800 and then using a US inflation process

916 00:40:07.800 --> 00:40:10.100 can have some really substantial implications.

917 00:40:11.970 --> 00:40:13.350 I just wanted to highlight that.

918 00:40:13.350 --> 00:40:18.350 I'm gonna push through some of these final notes here

919 00:40:18.780 --> 00:40:23.010 because I'd like to get to some of our findings.

920 00:40:23.010 --> 00:40:26.040 I do wanna leave you with three key resources at the end,

921 00:40:26.040 --> 00:40:28.950 and those are the consolidated health economics

922 00:40:28.950 --> 00:40:30.450 evaluation reporting standards,

923 00:40:30.450 --> 00:40:31.320 or CHEERS standards.

924 00:40:31.320 --> 00:40:33.180 There's a new update to those standards

925 00:40:33.180 --> 00:40:35.370 that was published in 2022.

926 00:40:35.370 --> 00:40:36.570 And then for those working

927 00:40:36.570 --> 00:40:39.060 in low and middle income country settings,

928 00:40:39.060 --> 00:40:42.090 Vasal and colleagues reference case

929 00:40:42.090 --> 00:40:44.064 for estimating the cost

930 00:40:44.064 --> 00:40:45.630 of global health services and interventions

931 00:40:45.630 --> 00:40:49.110 and the Bill and Melinda Gates Foundation 2014 guidelines

932 00:40:49.110 --> 00:40:51.570 that come through their reference case.

933 00:40:51.570 --> 00:40:54.900 And I'm happy to share those resources after the talk,

934 00:40:54.900 --> 00:40:56.610 but let me get into costing and practice here

935 00:40:56.610 --> 00:40:59.250 because I am running quite low on time.

936 00:40:59.250 --> 00:41:01.860 So the Global Health Cost Consortium,

937 00:41:01.860 --> 00:41:03.230 as Debbie mentioned at the top

938 00:41:03.230 --> 00:41:04.920 of the hour was funded

939 00:41:04.920 --> 00:41:06.970 by the Bill and Melinda Gates Foundation.

940 00:41:08.550 --> 00:41:11.670 I was involved with this project for about four years,

941 00:41:11.670 --> 00:41:15.600 and two of the outputs from the project

942 00:41:15.600 --> 00:41:18.450 were our unit cost study repository,

943 00:41:18.450 --> 00:41:21.060 which I'd invite you to visit.

944 00:41:21.060 --> 00:41:24.360 And that's really a one-stop shop for all

945 00:41:24.360 --> 00:41:25.770 of the published cost data

946 00:41:25.770 --> 00:41:27.690 from HIV and TB interventions

947 00:41:27.690 --> 00:41:28.523 that were conducted

948 00:41:28.523 --> 00:41:30.390 in low and middle income countries settings,

949 00:41:30.390 --> 00:41:32.223 really over the last 20 years or so.

950 00:41:33.150 --> 00:41:36.450 So we went through a pretty long painstaking process

951 00:41:36.450 --> 00:41:39.033 of extracting primary cost data,

952 00:41:39.033 --> 00:41:41.710 that is costs that were not modeled

953 00:41:42.840 --> 00:41:44.700 from the published literature,

954 00:41:44.700 --> 00:41:47.670 standardizing them across

955 00:41:47.670 --> 00:41:51.150 several hundred different variables,

956 00:41:51.150 --> 00:41:55.560 and then making them sort of available to the public

957 00:41:55.560 --> 00:41:57.630 at large in a pretty easy

958 00:41:57.630 --> 00:42:01.050 to use dropdown type of database.

959 00:42:01.050 --> 00:42:04.650 So if you're ever doing any program planning

960 00:42:04.650 --> 00:42:06.570 for HIV or TB interventions,

961 00:42:06.570 --> 00:42:09.630 I'd invite you to visit that site

962 00:42:09.630 --> 00:42:11.400 and see if you can get any utility

963 00:42:11.400 --> 00:42:13.740 from some of the efforts that we put forward.

964 00:42:13.740 --> 00:42:15.840 Another big output was the reference case

965 00:42:15.840 --> 00:42:17.700 that I mentioned before,

966 00:42:17.700 --> 00:42:19.439 guidelines for estimating costs

967 00:42:19.439 --> 00:42:21.333 for Global Health Interventions.

968 00:42:22.170 --> 00:42:24.520 And again, happy to share those after the talk.

969 00:42:26.100 --> 00:42:28.740 Another major output here was we were able

970 00:42:28.740 --> 00:42:33.120 to produce several different publications.

971 00:42:33.120 --> 00:42:36.330 So I'll present a little bit of the findings from that.

972 00:42:36.330 --> 00:42:38.129 So over several years, our team

973 00:42:38.129 --> 00:42:39.900 conducted the systematic search

974 00:42:39.900 --> 00:42:43.200 and screening of peer reviewed and grey literature.

975 00:42:43.200 --> 00:42:45.660 We had a few different goals here.

976 00:42:45.660 --> 00:42:48.390 We wanted to describe the quantity and characteristics

977 00:42:48.390 --> 00:42:50.820 of public published costing data

978 00:42:50.820 --> 00:42:54.270 to identify production patterns over time,

979 00:42:54.270 --> 00:42:55.770 so geographic location,

980 00:42:55.770 --> 00:42:58.260 publication venues like journals

981 00:42:58.260 --> 00:43:01.830 and authorship and to look into key methods

982 00:43:01.830 --> 00:43:04.560 and reporting standards to try to identify gaps

983 00:43:04.560 --> 00:43:06.540 in the costing literature.

984 00:43:06.540 --> 00:43:09.150 So I'll go over some of those findings.

985 00:43:09.150 --> 00:43:12.210 So figure one here shows the results

986 00:43:12.210 --> 00:43:15.180 of that search and screening process.

987 00:43:15.180 --> 00:43:17.700 So we covered articles that were published starting

988 00:43:17.700 --> 00:43:22.700 in January, 2006 through October, 2017.

989 00:43:22.710 --> 00:43:24.273 So it's a couple years old now.

990 00:43:25.770 --> 00:43:27.270 We use six databases,

991 00:43:27.270 --> 00:43:30.243 so PubMed, M Base, Web Science, Cochrane,

992 00:43:32.454 --> 00:43:34.350 and a number of others.

993 00:43:34.350 --> 00:43:36.930 I'm gonna give you high level content here.

994 00:43:36.930 --> 00:43:39.600 So searching also included grey literature,

995 00:43:39.600 --> 00:43:41.700 which you see on the right hand side.

996 00:43:41.700 --> 00:43:45.540 And we identified over 23,000 possible titles,

997 00:43:45.540 --> 00:43:48.360 including nearly 500 known costing studies

998 00:43:48.360 --> 00:43:49.770 that we had started with.

999 00:43:49.770 --> 00:43:51.600 So from these we were able to screen down

1000 00:43:51.600 --> 00:43:53.824 to 217 relevant titles

1001 00:43:53.824 --> 00:43:58.140 that got included in that unit cost study repository,

1002 00:43:58.140 --> 00:44:00.810 that database that I mentioned before.

1003 00:44:00.810 --> 00:44:05.673 And of those we published one study among 159

1004 00:44:10.560 --> 00:44:12.060 published studies that had taken place

1005 00:44:12.060 --> 00:44:13.203 in Sub-Saharan Africa.

1006 00:44:14.070 --> 00:44:17.610 So I'm gonna discuss really briefly two different studies

1007 00:44:17.610 --> 00:44:18.660 that came out of the effort.

1008 00:44:18.660 --> 00:44:22.230 And the first was that 2019 study that I just described.

1009 00:44:22.230 --> 00:44:24.060 And the second is a study that's in progress

1010 00:44:24.060 --> 00:44:26.340 where we're reviewing findings

1011 00:44:26.340 --> 00:44:28.020 from the detailed extraction

1012 00:44:28.020 --> 00:44:31.000 of the 243 studies that we started with

1013 00:44:32.010 --> 00:44:33.750 in the lines above.

1014 00:44:33.750 --> 00:44:35.820 So I might jump a little bit between findings

1015 00:44:35.820 --> 00:44:37.020 in these two different venues.

1016 00:44:37.020 --> 00:44:40.920 So the first study focused on that evidence

1017 00:44:40.920 --> 00:44:42.450 from Sub-Saharan Africa.

1018 00:44:42.450 --> 00:44:43.830 This gave us a really nice picture

1019 00:44:43.830 --> 00:44:46.830 of where costing data is and isn't collected

1020 00:44:46.830 --> 00:44:48.213 on the continent.

1021 00:44:49.050 --> 00:44:51.840 The studies we identified took place in 25 countries,

1022 00:44:51.840 --> 00:44:55.170 so mostly East Africa and Southern Africa.

1023 00:44:55.170 --> 00:44:57.870 And although this sort of geographic variation

1024 00:44:57.870 --> 00:44:59.400 is broad, you know,

1025 00:44:59.400 --> 00:45:00.990 we found that the quality of evidence

1026 00:45:00.990 --> 00:45:03.357 within many of these countries is,

1027 00:45:03.357 --> 00:45:05.160 or the quantity rather of evidence within these countries

1028 00:45:05.160 --> 00:45:06.690 is quite sparse.

1029 00:45:06.690 --> 00:45:10.200 So west Africa doesn't have

1030 00:45:10.200 --> 00:45:12.535 a great deal of primary cost data

1031 00:45:12.535 --> 00:45:14.190 in the published literature.

1032 00:45:14.190 --> 00:45:16.503 A lot of it, you know, is often modeled.

1033 00:45:18.720 --> 00:45:20.970 In terms of who is publishing studies

1034 00:45:20.970 --> 00:45:23.970 that report on HIV intervention costs.

1035 00:45:23.970 --> 00:45:25.890 There's a few notable peer-reviewed journals.

1036 00:45:25.890 --> 00:45:30.843 So PLoS One, J AIDS and AIDS are kind of our leaders.

1037 00:45:33.360 --> 00:45:34.710 But I think the big takeaway here

1038 00:45:34.710 --> 00:45:36.000 is that there's an awful lot

1039 00:45:36.000 --> 00:45:38.010 of potential destinations

1040 00:45:38.010 --> 00:45:41.050 for published primary cost data

1041 00:45:42.000 --> 00:45:45.000 and more so than I think we realized

1042 00:45:45.000 --> 00:45:47.760 when we set out in this exercise.

1043 00:45:47.760 --> 00:45:50.430 So you can see the large list

1044 00:45:50.430 --> 00:45:53.010 of different published studies on the left

1045 00:45:53.010 --> 00:45:55.440 or sorry journal destinations

1046 00:45:55.440 --> 00:45:57.090 for published studies on the left

1047 00:45:57.930 --> 00:45:59.280 and the table in the right.

1048 00:46:00.210 --> 00:46:01.820 These are grey literature resources.

1049 00:46:01.820 --> 00:46:05.340 So these are the sources of grey lit,

1050 00:46:05.340 --> 00:46:08.880 a few key players here, USAID, PEPFAR,

1051 00:46:08.880 --> 00:46:11.970 the Futures Group, Health Policy Project

1052 00:46:11.970 --> 00:46:15.240 and PANGEA and Bill and Melinda Gates

1053 00:46:15.240 --> 00:46:16.410 had their fingers

1054 00:46:16.410 --> 00:46:19.080 in a lot of these different published studies.

1055 00:46:19.080 --> 00:46:21.123 But these are the destinations.

1056 00:46:22.710 --> 00:46:24.570 One thing that I do wanna mention here

1057 00:46:24.570 --> 00:46:26.220 is that although we're examining

1058 00:46:26.220 --> 00:46:29.340 this subset of primary cost data that was collected

1059 00:46:29.340 --> 00:46:31.860 from studies in Sub-Saharan Africa,

1060 00:46:31.860 --> 00:46:33.270 there's a little bit of a disconnect here

1061 00:46:33.270 --> 00:46:37.050 in terms of where we find that primary cost evidence

1062 00:46:37.050 --> 00:46:39.690 is being published and where leaders in the field,

1063 00:46:39.690 --> 00:46:41.954 at least nine years ago

1064 00:46:41.954 --> 00:46:45.003 when the first CHEERS guidelines paper was published,

1065 00:46:46.020 --> 00:46:47.760 that there's, you know,

1066 00:46:47.760 --> 00:46:52.760 in that paper there was an explicit effort

1067 00:46:52.920 --> 00:46:56.820 to identify leading journals as landing places

1068 00:46:56.820 --> 00:46:59.190 for health economic evaluations.

1069 00:46:59.190 --> 00:47:02.520 But what we find is that of the 10 that they identified

1070 00:47:02.520 --> 00:47:04.830 in that CHEERS statement paper,

1071 00:47:04.830 --> 00:47:07.680 only three were we able to find

1072 00:47:07.680 --> 00:47:10.893 in our larger systematic search of the HIV literature.

1073 00:47:11.760 --> 00:47:14.220 And this is, you know, beyond Sub-Saharan Africa.

1074 00:47:14.220 --> 00:47:16.620 This is that paper too that I mentioned.

1075 00:47:16.620 --> 00:47:19.740 So this isn't necessarily an indictment of the list

1076 00:47:19.740 --> 00:47:23.160 that was generated by the CHEERS authors,

1077 00:47:23.160 --> 00:47:24.240 but it does highlight,

1078 00:47:24.240 --> 00:47:27.270 I think a large and varied number of journal sources

1079 00:47:27.270 --> 00:47:28.950 where these data are published.

1080 00:47:28.950 --> 00:47:30.480 And it emphasizes the need to be sure

1081 00:47:30.480 --> 00:47:32.040 that these standards, you know,

1082 00:47:32.040 --> 00:47:35.113 like the ones laid out by the CHEERS document are being

1083 00:47:35.113 --> 00:47:38.373 upheld across different publications.

1084 00:47:39.420 --> 00:47:43.680 So, you know, a large growth in publications over time,

1085 00:47:43.680 --> 00:47:46.170 a difference in the time to publication.

1086 00:47:46.170 --> 00:47:51.150 So peer reviewed studies tended to take 2.8 years on average

1087 00:47:51.150 --> 00:47:52.590 to get published,

1088 00:47:52.590 --> 00:47:55.980 whereas those in the grey literature 1.4 years.

1089 00:47:55.980 --> 00:47:59.710 So this is much more quickly disseminated

1090 00:48:00.900 --> 00:48:03.540 into the zeitgeist, you know,

1091 00:48:03.540 --> 00:48:06.150 the ability for folks to actually start

1092 00:48:06.150 --> 00:48:07.410 to use these data

1093 00:48:07.410 --> 00:48:11.013 for their own program planning purposes.

1094 00:48:12.900 --> 00:48:14.250 Scale, I'll mention.

1095 00:48:14.250 --> 00:48:16.680 This is probably our most substantial finding

1096 00:48:16.680 --> 00:48:17.580 and you don't need to spend

1097 00:48:17.580 --> 00:48:19.230 a lot of time pouring over this table,

1098 00:48:19.230 --> 00:48:21.030 but this was actually quite damning.

1099 00:48:22.440 --> 00:48:23.970 If you don't take anything else away

1100 00:48:23.970 --> 00:48:24.990 from this presentation,

1101 00:48:24.990 --> 00:48:28.323 I think, I hope that that this resonates,

1102 00:48:29.310 --> 00:48:30.840 that reporting of scale

1103 00:48:30.840 --> 00:48:34.080 is, you know, it's a really critical, important component

1104 00:48:34.080 --> 00:48:36.180 of any costing exercise.

1105 00:48:36.180 --> 00:48:40.020 But what we found is that in, you know,

1106 00:48:40.020 --> 00:48:43.620 the six of the intervention types of all the studies

1107 00:48:43.620 --> 00:48:46.440 through which we were able to collect data,

1108 00:48:46.440 --> 00:48:48.610 the average number of unit costs

1109 00:48:50.190 --> 00:48:52.623 in those published studies,

1110 00:48:54.060 --> 00:48:57.243 scale was reported below 50% of the time.

1111 00:48:58.230 --> 00:49:03.230 And in some areas as low as 35 or 26% of the time.

1112 00:49:04.320 --> 00:49:06.303 So in total, I think the average, you know,

1113 00:49:06.303 --> 00:49:07.530 that we found was something

1114 00:49:07.530 --> 00:49:10.800 like 44% of unit costs have

1115 00:49:10.800 --> 00:49:13.865 explicit measurement of scale associated

1116 00:49:13.865 --> 00:49:16.020 with those reports.

1117 00:49:16.020 --> 00:49:18.540 So that's a problem,

1118 00:49:18.540 --> 00:49:20.723 that's something that needs to improve in the field.

1119 00:49:21.780 --> 00:49:24.090 And then I'll also mention perspectives.

1120 00:49:24.090 --> 00:49:28.987 So despite I think recommendations and urging from say,

1121 00:49:30.000 --> 00:49:31.890 the Gates Foundation's reference case,

1122 00:49:31.890 --> 00:49:33.453 which I cited earlier,

1123 00:49:34.290 --> 00:49:36.150 which emphasizes that authors should focus

1124 00:49:36.150 --> 00:49:38.850 on societal perspectives as much as possible,

1125 00:49:38.850 --> 00:49:40.710 we actually find here in terms

1126 00:49:40.710 --> 00:49:45.710 of what folks in these articles report

1127 00:49:45.750 --> 00:49:47.790 as their given perspective

1128 00:49:47.790 --> 00:49:51.210 and when we clean it up and we, you know,

1129 00:49:51.210 --> 00:49:53.280 we figure out among those who didn't report

1130 00:49:53.280 --> 00:49:54.630 what their perspective was, by the way,

1131 00:49:54.630 --> 00:49:57.840 15.6% of of studies

1132 00:49:57.840 --> 00:50:00.180 that we uncover don't report a perspective,

1133 00:50:00.180 --> 00:50:03.003 which is again, a problem for reporting standards,

1134 00:50:04.680 --> 00:50:08.190 only seven or about 2.9% of the studies

1135 00:50:08.190 --> 00:50:11.610 that we identified take a societal perspective.

1136 00:50:11.610 --> 00:50:13.320 So, you know, most of this is done

1137 00:50:13.320 --> 00:50:15.360 at the level of the provider.

1138 00:50:15.360 --> 00:50:17.310 So, you know, it gives you a little bit of context,

1139 00:50:17.310 --> 00:50:19.983 I think for where there's room for growth.

1140 00:50:21.420 --> 00:50:24.090 So in conclusion, on these points, you know,

1141 00:50:24.090 --> 00:50:27.330 there's, I wanna say that there's, you know,

1142 00:50:27.330 --> 00:50:28.833 a few final recommendations.

1143 00:50:30.570 --> 00:50:32.280 We recommend that that future costing

1144 00:50:32.280 --> 00:50:35.430 and cost effectiveness studies closely follow

1145 00:50:35.430 --> 00:50:38.133 the Gates and the GHCC reference case.

1146 00:50:40.186 --> 00:50:42.090 And you know,

1147 00:50:42.090 --> 00:50:44.850 that there needs to be more detailed reporting

1148 00:50:44.850 --> 00:50:47.490 on a number of different items

1149 00:50:47.490 --> 00:50:49.680 that I wasn't able to touch on in this talk.

1150 00:50:49.680 --> 00:50:51.120 But, you know, most of all,

1151 00:50:51.120 --> 00:50:53.580 I think scale is something that's really missing

1152 00:50:53.580 --> 00:50:54.480 in the literature.

1153 00:50:55.650 --> 00:50:59.790 So I won't touch on this too much

1154 00:50:59.790 --> 00:51:01.440 other than to say there's some future research

1155 00:51:01.440 --> 00:51:02.580 that we're working on

1156 00:51:02.580 --> 00:51:05.250 to determine the quality of some of these cost data.

1157 00:51:05.250 --> 00:51:09.660 So be on the lookout for publication on that in the future.

1158 00:51:09.660 --> 00:51:13.337 And now that I've ran through all of our Q and A time,

1159 00:51:13.337 --> 00:51:14.790 I do wanna thank you for attending

1160 00:51:14.790 --> 00:51:16.590 and I'm happy to take any questions.

1161 00:51:20.490 --> 00:51:21.323 <v ->Yeah.</v>

1162 00:51:22.530 --> 00:51:24.210 Thank you for the great talk.

1163 00:51:24.210 --> 00:51:25.290 So I had a question,

1164 00:51:25.290 --> 00:51:28.170 comment about, you know, the societal perspective.

1165 00:51:28.170 --> 00:51:31.380 I think in certain scenarios or situation,

1166 00:51:31.380 --> 00:51:32.850 this could be a little bit tricky.

1167 00:51:32.850 --> 00:51:34.860 For example, if you take vaccine

1168 00:51:34.860 --> 00:51:38.133 for some infectious disease in low income countries,

1169 00:51:39.030 --> 00:51:41.670 usually the price is heavily negotiated

1170 00:51:41.670 --> 00:51:46.527 between the pharmaceutical companies and donors and NGOs.

1171 00:51:46.527 --> 00:51:49.170 And if you take the societal perspective,

1172 00:51:49.170 --> 00:51:52.050 when you are doing the cost effectiveness analysis,

1173 00:51:52.050 --> 00:51:55.050 including, you know, the productivity loss,

1174 00:51:55.050 --> 00:51:59.820 the income loss, the vaccine becomes extremely,

1175 00:51:59.820 --> 00:52:02.610 you know, cost effective or even cost saving.

1176 00:52:02.610 --> 00:52:04.710 So even if they price the vaccine

1177 00:52:04.710 --> 00:52:06.960 to $50, $100,

1178 00:52:06.960 --> 00:52:10.080 still it becomes cost saving, which is, you know,

1179 00:52:10.080 --> 00:52:12.720 it becomes an excuse in hands of, you know,

1180 00:52:13.710 --> 00:52:16.680 the pharmaceutical companies to jump up the price of vaccine

1181 00:52:16.680 --> 00:52:19.140 because such a cost effective strategy.

1182 00:52:19.140 --> 00:52:20.910 So I dunno if you have thought about that.

1183 00:52:20.910 --> 00:52:23.700 I usually, I have purposefully avoided

1184 00:52:23.700 --> 00:52:27.270 taking societal perspective in those contexts

1185 00:52:27.270 --> 00:52:29.820 because I just don't want to put these numbers out,

1186 00:52:29.820 --> 00:52:34.050 but I don't know if you have comments, thoughts.

1187 00:52:34.050 --> 00:52:36.540 <v ->Yeah, no, I mean that's a great point.</v>

1188 00:52:36.540 --> 00:52:39.720 I often don't think far enough along the causal chain

1189 00:52:39.720 --> 00:52:43.470 to consider sort of the potential negative externalities

1190 00:52:43.470 --> 00:52:48.470 of price gouging, you know, in those contexts.

1191 00:52:49.020 --> 00:52:51.960 I guess I'll say, you know,

1192 00:52:51.960 --> 00:52:54.930 at least in the context of what we found, you know,

1193 00:52:54.930 --> 00:52:57.150 in our search of the literature and you know,

1194 00:52:57.150 --> 00:52:59.190 there were a few of those different intervention types

1195 00:52:59.190 --> 00:53:01.650 that dealt with pharmaceuticals,

1196 00:53:01.650 --> 00:53:03.900 you know, and the costs of those being, you know,

1197 00:53:03.900 --> 00:53:07.740 not insignificant drivers of overall program

1198 00:53:07.740 --> 00:53:10.600 and unit costs, you know, for HIV care

1199 00:53:11.940 --> 00:53:15.853 that most of the studies that we identified,

1200 00:53:20.100 --> 00:53:22.140 you know, really do focus in, you know,

1201 00:53:22.140 --> 00:53:24.660 don't tend to focus in on the societal level.

1202 00:53:24.660 --> 00:53:26.670 So it's not, you know,

1203 00:53:26.670 --> 00:53:29.580 perhaps that that type of crisis

1204 00:53:29.580 --> 00:53:31.380 hasn't borne out necessarily

1205 00:53:31.380 --> 00:53:33.510 as a result of some of this in the literature,

1206 00:53:33.510 --> 00:53:35.708 but it's definitely not something that's discussed

1207 00:53:35.708 --> 00:53:37.290 as often as I think it should be.

1208 00:53:37.290 --> 00:53:39.027 So you raise an excellent point and, you know,

1209 00:53:39.027 --> 00:53:40.770 and one that I hope, you know,

1210 00:53:40.770 --> 00:53:43.167 gets added to further discussions

1211 00:53:43.167 --> 00:53:46.833 in published literature and forums like this.

1212 00:53:48.629 --> 00:53:49.462 So I don't have a good, you know,

1213 00:53:49.462 --> 00:53:54.270 I don't have a good anecdotal example to share,

1214 00:53:54.270 --> 00:53:56.370 but I really, yeah, I like the point.

1215 00:53:56.370 --> 00:53:58.020 Yeah. Jeremy.

1216 00:53:58.020 --> 00:53:59.100 <v ->Yeah, Drew, thanks so much.</v>

1217 00:53:59.100 --> 00:54:01.053 This was really informative.

1218 00:54:01.950 --> 00:54:03.390 I actually wonder maybe building

1219 00:54:03.390 --> 00:54:05.040 on the previous question,

1220 00:54:05.040 --> 00:54:08.430 if you could go back to the slide with the table

1221 00:54:08.430 --> 00:54:10.170 from that rural Uganda study,

1222 00:54:10.170 --> 00:54:14.790 because my question was about sort of was this a financial

1223 00:54:14.790 --> 00:54:17.730 or economic perspective that was being presented

1224 00:54:17.730 --> 00:54:20.070 and I was honing in on the ART

1225 00:54:20.070 --> 00:54:21.660 because presumably, you know,

1226 00:54:21.660 --> 00:54:25.290 through PEPFAR from the programs perspective,

1227 00:54:25.290 --> 00:54:28.516 ART should have been without cost

1228 00:54:28.516 --> 00:54:31.230 and also without cost to the patient.

1229 00:54:31.230 --> 00:54:32.700 So then, so which made me think,

1230 00:54:32.700 --> 00:54:35.790 well maybe this is an economic perspective,

1231 00:54:35.790 --> 00:54:36.750 but then there are other,

1232 00:54:36.750 --> 00:54:39.300 all those other pieces of deliver of getting the medicine

1233 00:54:39.300 --> 00:54:40.133 to the patient,

1234 00:54:40.133 --> 00:54:41.790 the whole supply chain and whatnot.

1235 00:54:41.790 --> 00:54:44.490 And so I was just wondering if you have a sense of like,

1236 00:54:44.490 --> 00:54:47.350 was this trying to describe programmatic

1237 00:54:49.398 --> 00:54:51.461 or economic perspectives

1238 00:54:51.461 --> 00:54:53.940 and, you know, when, if this is economic,

1239 00:54:53.940 --> 00:54:57.360 should we truly be thinking about like that whole process?

1240 00:54:57.360 --> 00:55:01.260 Like where in the supply chain do you start counting?

1241 00:55:01.260 --> 00:55:03.660 <v ->Yeah, you know, I wasn't involved</v>

1242 00:55:03.660 --> 00:55:04.710 in this particular study

1243 00:55:04.710 --> 00:55:07.470 and so I'm happy to field that question to Jim

1244 00:55:07.470 --> 00:55:09.860 'cause he uses this example in his talks.

1245 00:55:09.860 --> 00:55:13.350 My sense is that this is programmatic, you know.

1246 00:55:13.350 --> 00:55:15.720 It does seem fairly narrow in scope,

1247 00:55:15.720 --> 00:55:17.190 but you do, you raise a really good point

1248 00:55:17.190 --> 00:55:19.440 I think, you know, that Reza raised as well,

1249 00:55:19.440 --> 00:55:21.210 which is, you know,

1250 00:55:21.210 --> 00:55:23.670 it depends on who's providing that,

1251 00:55:23.670 --> 00:55:25.520 where the supply chain is coming from

1252 00:55:26.634 --> 00:55:27.720 and you know, and that obviously

1253 00:55:27.720 --> 00:55:29.070 has downstream implications

1254 00:55:29.070 --> 00:55:34.070 for, you know, how you deal with the costing procedures

1255 00:55:34.860 --> 00:55:37.593 in, you know, these different income country settings,

1256 00:55:39.120 --> 00:55:42.330 how you'd inflate and how you'd adjust.

1257 00:55:42.330 --> 00:55:46.620 And so supply chains don't often make it into the discussion

1258 00:55:46.620 --> 00:55:49.170 in these write-ups, but they need to, right?

1259 00:55:49.170 --> 00:55:51.320 Because that's a really critical component.

1260 00:55:52.920 --> 00:55:55.530 I don't know if that answers your underlying question.

1261 00:55:55.530 --> 00:55:58.830 <v ->Yeah, I think it gets to it for sure.</v>

1262 00:55:58.830 --> 00:55:59.663 <v ->Okay.</v>

1263 00:55:59.663 --> 00:56:00.496 Yeah.

1264 00:56:00.496 --> 00:56:01.329 And you know, like I said,

1265 00:56:01.329 --> 00:56:02.580 I'm happy to reach out and and find out

1266 00:56:02.580 --> 00:56:05.040 a little this particular example,

1267 00:56:05.040 --> 00:56:06.270 but it's question.

1268 00:56:06.270 --> 00:56:07.103 <v ->Great, thanks.</v>

1269 00:56:08.124 --> 00:56:09.360 <v ->Yeah.</v>

1270 00:56:09.360 --> 00:56:11.100 I do realize we're at the top of the hour.

1271 00:56:11.100 --> 00:56:14.520 I'm not able to see the chat very well.

1272 00:56:14.520 --> 00:56:17.460 So if there's anyone that would like to raise anything

1273 00:56:17.460 --> 00:56:18.870 from there that I'm missing,

1274 00:56:18.870 --> 00:56:21.000 I'm happy to field those.

1275 00:56:21.000 --> 00:56:22.106 <v ->Drew.</v>

1276 00:56:22.106 --> 00:56:25.860 I would just say that before David Palteo ran away,

1277 00:56:25.860 --> 00:56:28.590 he said that for what it's worth,

1278 00:56:28.590 --> 00:56:32.040 his concern is the mirror opposite of Reza's.

1279 00:56:32.040 --> 00:56:34.740 When we abandon the societal perspective,

1280 00:56:34.740 --> 00:56:37.800 interventions that have broad public benefit

1281 00:56:37.800 --> 00:56:39.570 can be greatly undervalued

1282 00:56:39.570 --> 00:56:41.490 because they're not germane to the narrow

1283 00:56:41.490 --> 00:56:45.330 decision maker and real economic resource use

1284 00:56:45.330 --> 00:56:46.920 such as volunteer time and effort

1285 00:56:46.920 --> 00:56:49.350 can be ignored because it looks free

1286 00:56:49.350 --> 00:56:51.060 to the narrow stakeholder.

1287 00:56:51.060 --> 00:56:53.940 So he's, and I would also say

1288 00:56:53.940 --> 00:56:55.077 that my question,

1289 00:56:55.077 --> 00:56:57.780 and this is one not as an economist

1290 00:56:57.780 --> 00:56:59.160 that I've wondered about

1291 00:56:59.160 --> 00:57:00.780 for a couple of years,

1292 00:57:00.780 --> 00:57:03.510 is that from an equity perspective,

1293 00:57:03.510 --> 00:57:07.440 I actually wonder about the household level perspective

1294 00:57:07.440 --> 00:57:10.623 as opposed to the individual level perspective.

1295 00:57:12.690 --> 00:57:14.880 I've never seen one of these presentations

1296 00:57:14.880 --> 00:57:17.970 that looks at the household level

1297 00:57:17.970 --> 00:57:20.130 and yet it's at the household level

1298 00:57:20.130 --> 00:57:22.770 that cushioning of resources

1299 00:57:22.770 --> 00:57:26.100 and equity balances often happen

1300 00:57:26.100 --> 00:57:27.987 not at the individual level.

1301 00:57:27.987 --> 00:57:31.440 And so I'm just curious from your experience,

1302 00:57:31.440 --> 00:57:36.440 have you ever seen work done at the household cost level?

1303 00:57:36.720 --> 00:57:37.740 And what do you think

1304 00:57:37.740 --> 00:57:41.250 about those as an equity perspective?

1305 00:57:41.250 --> 00:57:42.510 <v ->Yeah, I mean I think there's,</v>

1306 00:57:42.510 --> 00:57:44.790 I think there's some downstream costs there that, you know,

1307 00:57:44.790 --> 00:57:45.900 in theory would get

1308 00:57:45.900 --> 00:57:50.040 some subsumed into a societal perspective.

1309 00:57:50.040 --> 00:57:53.070 But I struggle to think of specific examples

1310 00:57:53.070 --> 00:57:56.010 that kind of cast the umbrella wide enough

1311 00:57:56.010 --> 00:57:57.150 or cast a net wide enough

1312 00:57:57.150 --> 00:58:00.750 to include other individuals within the household.

1313 00:58:00.750 --> 00:58:03.210 So I think that's a really,

1314 00:58:03.210 --> 00:58:04.890 that's a really great point.

1315 00:58:04.890 --> 00:58:05.723 You know, and it speaks

1316 00:58:05.723 --> 00:58:10.670 to the demand side part of this question

1317 00:58:12.480 --> 00:58:13.770 in a way that's really, you know,

1318 00:58:13.770 --> 00:58:15.363 potentially quite meaningful.

1319 00:58:16.410 --> 00:58:21.410 And I would tend to think that as you suspect, you know,

1320 00:58:23.220 --> 00:58:27.750 we'd be moving towards even greater downstream benefits

1321 00:58:27.750 --> 00:58:28.680 at the household level.

1322 00:58:28.680 --> 00:58:30.600 So I am working on one study right now

1323 00:58:30.600 --> 00:58:31.980 in Uganda actually

1324 00:58:31.980 --> 00:58:35.359 with Jeremy who I think might have jumped off

1325 00:58:35.359 --> 00:58:40.200 where we are investigating patient costs

1326 00:58:40.200 --> 00:58:42.960 as a component of that intervention

1327 00:58:42.960 --> 00:58:46.170 and we do tend to ask in the scope

1328 00:58:46.170 --> 00:58:51.170 of collecting patient costs data about opportunity costs

1329 00:58:51.540 --> 00:58:53.370 that are germane to the rest of the household.

1330 00:58:53.370 --> 00:58:57.550 So we'll often ask questions about household expenditures

1331 00:58:58.770 --> 00:59:01.660 and household income generating activities

1332 00:59:03.180 --> 00:59:07.260 as well as durable assets of the household

1333 00:59:07.260 --> 00:59:09.480 and ways that households can sort of deal

1334 00:59:09.480 --> 00:59:11.640 with shocks over time.

1335 00:59:11.640 --> 00:59:13.350 'Cause those are all really important questions

1336 00:59:13.350 --> 00:59:16.110 I think that play into, you know,

1337 00:59:16.110 --> 00:59:17.910 what the experience of a patient is like,

1338 00:59:17.910 --> 00:59:20.370 particularly in a lower middle income country setting

1339 00:59:20.370 --> 00:59:21.420 where one of these interventions

1340 00:59:21.420 --> 00:59:24.270 might have a really meaningful downstream impact

1341 00:59:24.270 --> 00:59:26.700 on, you know, on the rest of the household.

1342 00:59:26.700 --> 00:59:29.370 So it's something that I spend a lot of time thinking about

1343 00:59:29.370 --> 00:59:31.290 'cause I kind of started in that world I think

1344 00:59:31.290 --> 00:59:34.260 before coming into the economic evaluation world.

1345 00:59:34.260 --> 00:59:37.350 And it's one that I think doesn't currently receive

1346 00:59:37.350 --> 00:59:39.930 a great deal of attention, but ought to.

1347 00:59:39.930 --> 00:59:41.910 But again, to, you know, to Reza's warning,

1348 00:59:41.910 --> 00:59:45.240 I think you have to be careful about, you know,

1349 00:59:45.240 --> 00:59:47.523 how much generalizability you pull,

1350 00:59:49.020 --> 00:59:51.480 and try to tout from different studies like this

1351 00:59:51.480 --> 00:59:55.140 because, right, they have different implications

1352 00:59:55.140 --> 00:59:56.280 for different parties

1353 00:59:56.280 --> 00:59:57.117 And so, you know,

1354 00:59:57.117 --> 00:59:59.550 I'd like to see a standard,

1355 00:59:59.550 --> 01:00:01.440 not where one perspective is chosen

1356 01:00:01.440 --> 01:00:03.840 over another ad nauseum,

1357 01:00:03.840 --> 01:00:05.490 but where they're both incorporated

1358 01:00:05.490 --> 01:00:07.410 and where there's a societal

1359 01:00:07.410 --> 01:00:11.160 and a financial or a programmatic perspective presented

1360 01:00:11.160 --> 01:00:14.070 within the same paper, you know.

1361 01:00:14.070 --> 01:00:17.490 And readers of those pieces of evidence

1362 01:00:17.490 --> 01:00:18.870 can then decide for themselves,

1363 01:00:18.870 --> 01:00:20.070 like which is the perspective

1364 01:00:20.070 --> 01:00:21.390 that's the most meaningful?

1365 01:00:21.390 --> 01:00:24.300 What are the trade-offs, you know, along the way?

1366 01:00:24.300 --> 01:00:27.930 'Cause it, you know, the value add of that is substantial,

1367 01:00:27.930 --> 01:00:30.240 to add in a societal perspective piece

1368 01:00:30.240 --> 01:00:33.060 to a publish economic evaluation.

1369 01:00:33.060 --> 01:00:35.490 <v ->So I think we do need to wrap up.</v>

1370 01:00:35.490 --> 01:00:36.870 But thank you Drew.

1371 01:00:36.870 --> 01:00:38.910 I think that's very helpful

1372 01:00:38.910 --> 01:00:42.993 and we will have the video available for people.

1373 01:00:44.970 --> 01:00:47.550 And really appreciate your time

1374 01:00:47.550 --> 01:00:50.490 in preparing all of this material

1375 01:00:50.490 --> 01:00:53.283 and sharing it with all of us.

1376 01:00:54.420 --> 01:00:55.500 <v ->Appreciate the invitation</v>

1377 01:00:55.500 --> 01:00:58.260 and thanks to those attended today.

1378 01:00:58.260 --> 01:00:59.660 It's nice to see some faces.

1379 01:01:01.260 --> 01:01:02.093 <v ->Okay.</v>