WEBVTT

1 00:00:00.060 --> 00:00:02.460 <v ->Legislation coordination committee.</v>

2 00:00:02.460 --> 00:00:05.760 She is also the Country Director for Nepal,

3 00:00:05.760 --> 00:00:09.060 for the Northern Pacific Global Health Research Fellows

4 00:00:09.060 --> 00:00:10.710 Training Consortium.

5 00:00:10.710 --> 00:00:14.190 She leads multiple implementation science research projects

6 00:00:14.190 --> 00:00:16.380 to prevent non-communicable diseases,

7 00:00:16.380 --> 00:00:19.590 including cervical cancer, cardiovascular disease

8 00:00:19.590 --> 00:00:21.480 and diabetes.

9 00:00:21.480 --> 00:00:25.080 She and I have been working together for the past six years.

10 00:00:25.080 --> 00:00:29.130 She originally came to work with me when I was at Harvard

11 00:00:29.130 --> 00:00:32.670 as a part of my NIH Director's Pioneer Award,

12 00:00:32.670 --> 00:00:35.820 and we started to develop some of these research projects

13 00:00:35.820 --> 00:00:38.160 that Dr. Shrestha is gonna talk about.

14 00:00:38.160 --> 00:00:41.670 But she's also gone off in her own directions as well.

15 00:00:41.670 --> 00:00:45.690 And we've continued to work together, we're co-PIs,

16 00:00:45.690 --> 00:00:48.570 or I'm site PI of multiple grants

17 00:00:48.570 --> 00:00:52.710 that she has led the submission of and succeeded in winning.

18 00:00:52.710 --> 00:00:55.710 And it's a very productive relationship.

19 00:00:55.710 --> 00:00:58.650 We've had many, many papers published.

20 00:00:58.650 --> 00:01:00.840 She's also an Adjunct Assistant Professor

21 00:01:00.840 --> 00:01:04.710 in our Chronic Disease Epidemiology Department here at Yale.

22 00:01:04.710 --> 00:01:09.710 And she's available for discussions with students

23 00:01:10.050 --> 00:01:12.390 and other researchers here in the Yale community.

24 00:01:12.390 --> 00:01:15.330 She has lots of data that she can collaborate

25 00:01:15.330 --> 00:01:19.380 in the analysis of, and many ideas for other projects

26 00:01:19.380 --> 00:01:21.960 that could be conducted in Nepal.

27 00:01:21.960 --> 00:01:24.330 So, she'll be here until Friday

28 00:01:24.330 --> 00:01:27.990 and she probably still has a few slots available

29 00:01:27.990 --> 00:01:29.190 in her schedule.

30 00:01:29.190 --> 00:01:30.990 And if you would like to meet with her

31 00:01:30.990 --> 00:01:32.880 to discuss any of these things further,

32 00:01:32.880 --> 00:01:36.289 you can also get in touch with William Tootle

33 00:01:36.289 --> 00:01:38.370 who's managing her itinerary.

34 00:01:38.370 --> 00:01:42.330 So, I'd like to turn this over to Dr. Shrestha now

35 00:01:42.330 --> 00:01:44.490 and I'm really looking forward to her talk.

36 00:01:44.490 --> 00:01:46.770 Thanks so much everybody for joining us

37 00:01:46.770 --> 00:01:51.770 and for Dr. Shrestha for traveling all the way over here

38 00:01:52.200 --> 00:01:56.340 in somewhat in the midst of COVID to meet with us

39 00:01:56.340 --> 00:01:58.533 and give this presentation today.

40 00:01:59.880 --> 00:02:03.003 <v ->Thank you, Donna, for such a wonderful introduction.</v>

41 00:02:05.280 --> 00:02:09.690 And thank you everyone for those who are present

42 00:02:09.690 --> 00:02:12.810 in-person in this room and then those who are joining online

43 00:02:12.810 --> 00:02:16.770 and Zoom, thank you so much for your time and interest.

44 00:02:16.770 --> 00:02:21.180 So, today's talk is gonna be a little very informal

45 00:02:21.180 --> 00:02:24.270 kind of discussion on opportunities and challenges

46 00:02:24.270 --> 00:02:26.670 of implementation research to prevent

47 00:02:26.670 --> 00:02:29.760 and control non-communicable diseases in LMIC.

48 00:02:29.760 --> 00:02:34.350 And I'll be sharing a lot of my experience from Nepal.

49 00:02:34.350 --> 00:02:37.140 And I think that a lot of these challenges,

50 00:02:37.140 --> 00:02:42.030 would be also applicable to other parts of the world

51 00:02:42.030 --> 00:02:46.173 where the resources are limited to do these kinds of work.

52 00:02:47.100 --> 00:02:51.450 And my talk would be like more about a general introduction

53 00:02:51.450 --> 00:02:56.450 of what we are doing in Nepal in collaboration with CMIPS

54 00:02:57.180 --> 00:02:59.610 and the second part would be

55 00:02:59.610 --> 00:03:02.190 like what were the major opportunities and challenges

56 00:03:02.190 --> 00:03:05.090 and specific to doing the implementation research

57 00:03:05.090 --> 00:03:06.333 in that context.

58 00:03:07.440 --> 00:03:09.150 So, let me give you like a...

59 00:03:09.150 --> 00:03:13.760 Let me start with a brief introduction of Nepal.

60 00:03:13.760 --> 00:03:18.330 It's a small country in between India and China,

61 00:03:18.330 --> 00:03:20.640 located in Southeast Asia.

62 00:03:20.640 --> 00:03:25.640 And compared to US, it's about 67 times smaller than the US.

63 00:03:28.500 --> 00:03:31.050 There are 11 times fewer people

64 00:03:31.050 --> 00:03:33.423 that live in Nepal compared to US.

65 00:03:34.347 --> 00:03:38.670 The per capita GDP is only 4.3% of the US per capita GDP

66 00:03:40.020 --> 00:03:43.530 and life expectancy is about nine years less

67 00:03:43.530 --> 00:03:45.183 than that of US.

68 00:03:47.910 --> 00:03:50.910 And then Nepal's life expectancy

69 00:03:50.910 --> 00:03:53.340 has been increasing over the past few decades

70 00:03:53.340 --> 00:03:57.000 and then it's expected to keep increasing.

71 00:03:57.000 --> 00:03:59.340 And with this longevity,

72 00:03:59.340 --> 00:04:01.230 a lot of non-communicable diseases

73 00:04:01.230 --> 00:04:05.310 and chronic diseases have crossed our paths.

74 00:04:05.310 --> 00:04:10.310 And if we look at the population pyramid of 2020,

75 00:04:10.772 --> 00:04:15.772 there were lots of bulk of the population

76 00:04:17.250 --> 00:04:19.800 were towards the base of the pyramid,

77 00:04:19.800 --> 00:04:23.610 indicating that lots of young population was in the country.

78 00:04:23.610 --> 00:04:28.560 But the prediction for 2025 shows that we will have

79 00:04:28.560 --> 00:04:30.720 this population pyramid changed by then

80 00:04:30.720 --> 00:04:34.413 and with a lot of middle aged population growing.

81 00:04:36.720 --> 00:04:37.590 <v Donna>Archana, could you go back</v>

82 00:04:37.590 --> 00:04:39.690 to that slide for a second?

83 00:04:39.690 --> 00:04:42.793 It's a little hard to read what the x-axis is and the-

84 00:04:42.793 --> 00:04:45.360 <v ->Oh, sorry.</v> <v ->The chart that-</v>

85 00:04:45.360 --> 00:04:46.620 <v ->So this one?</v>

86 00:04:46.620 --> 00:04:48.450 Yeah, this is year.

87 00:04:48.450 --> 00:04:49.830 <v ->So what's the first year?</v>

88 00:04:49.830 --> 00:04:51.229 <v Archana>1990.</v>

89 00:04:51.229 --> 00:04:55.770 <v ->So that's like a remarkable increase in life expectancy</v>

90 00:04:55.770 --> 00:04:58.740 over a very, very short period of time.

91 00:04:58.740 --> 00:05:00.870 I'm wondering if you could say a little bit

92 00:05:00.870 --> 00:05:04.290 about has that been researched at all?

93 00:05:04.290 --> 00:05:07.500 Is it known or is there good evidence

94 00:05:07.500 --> 00:05:10.620 for why there was this remarkable increase

95 00:05:10.620 --> 00:05:12.990 over such a short period of time where,

96 00:05:12.990 --> 00:05:17.430 what was it? It was like, what was it like in 19?

97 00:05:17.430 --> 00:05:18.480 What did it start at?

98 00:05:18.480 --> 00:05:23.480 Like 55 to 60, so is that what it's hard to read,

99 00:05:24.120 --> 00:05:25.480 but that's the y-axis.

100 00:05:25.480 --> 00:05:29.100 <v ->So in 1990s it was about around around 55 to 60.</v>

101 00:05:29.100 --> 00:05:33.423 And then by 2019 it's a lot about like 72 years.

102 00:05:34.380 --> 00:05:36.810 So a lot of it is contributed

103 00:05:36.810 --> 00:05:39.780 to improvement in maternal child health,

104 00:05:39.780 --> 00:05:41.520 specifically infant mortality rate.

105 00:05:41.520 --> 00:05:44.020 Actually, Nepal was one of the countries that made

106 00:05:45.000 --> 00:05:48.060 that achieved the million development goal

107 00:05:48.060 --> 00:05:50.400 in relation to infant mortality rate.

108 00:05:50.400 --> 00:05:53.190 And the infant mortality rate decreased really rapidly

109 00:05:53.190 --> 00:05:54.023 during that time.

110 00:05:54.023 --> 00:05:56.730 And that is considered one of the major contributors

111 00:05:56.730 --> 00:06:00.003 to what's increasing life expectancy.

112 00:06:01.080 --> 00:06:03.030 <v Donna>And what did Nepal do to break down</v>

113 00:06:03.030 --> 00:06:04.380 that actual mortality?

114 00:06:04.380 --> 00:06:07.113 <v ->A lot of things they were like,</v>

115 00:06:07.952 --> 00:06:12.057 so Nepal's health system was just built

116 00:06:14.310 --> 00:06:17.580 to address maternal child health and infant mortality

117 00:06:17.580 --> 00:06:19.920 and communicable diseases.

118 00:06:19.920 --> 00:06:22.786 So we actually started pretty late

119 00:06:22.786 --> 00:06:25.080 in terms of health system.

120 00:06:25.080 --> 00:06:28.350 We started in 1978 after the Alma-Ata conference

121 00:06:28.350 --> 00:06:33.000 when the primary healthcare was very advocated.

122 00:06:33.000 --> 00:06:36.930 And the Nepal health system was built in '80s,

123 00:06:36.930 --> 00:06:39.982 basically from '84 to '90.

124 00:06:39.982 --> 00:06:44.982 And the government were very progressive towards that

125 00:06:45.180 --> 00:06:47.550 and we built a health system that reached each

126 00:06:47.550 --> 00:06:52.290 and every corner of the country, even the most modest areas.

127 00:06:52.290 --> 00:06:55.380 So all of the villages had at least one

128 00:06:55.380 --> 00:06:56.460 or two health centers

129 00:06:56.460 --> 00:06:58.560 and they had primary healthcare outreach centers.

130 00:06:58.560 --> 00:07:01.350 So from these health centers people,

131 00:07:01.350 --> 00:07:04.330 they were called village health workers were assigned

132 00:07:05.340 --> 00:07:08.700 to run these outreach centers every month they would go

133 00:07:08.700 --> 00:07:11.580 like 5 to 7 times to different parts of the villages

134 00:07:11.580 --> 00:07:12.930 that were not accessible.

135 00:07:12.930 --> 00:07:15.120 And then they distribute family planning,

136 00:07:15.120 --> 00:07:19.380 they did immunization, child growth monitoring

137 00:07:19.380 --> 00:07:23.490 and antenatal care, postnatal care.

138 00:07:23.490 --> 00:07:27.960 So a lot of health system developed during that time.

139 00:07:27.960 --> 00:07:31.680 And it also significantly contributed to maternal

140 00:07:31.680 --> 00:07:36.573 like improvement in maternal child health and reduced,

141 00:07:38.070 --> 00:07:40.200 that's from malaria, tuberculosis.

142 00:07:40.200 --> 00:07:44.070 And Nepal is also has the widest network of dots

143 00:07:44.070 --> 00:07:46.710 and malarias treatment centers,

144 00:07:46.710 --> 00:07:49.590 even in the most remote area,

145 00:07:49.590 --> 00:07:52.500 there is availability of testing for TB

146 00:07:52.500 --> 00:07:55.350 and then there is availability of the dots.

147 00:07:55.350 --> 00:07:58.590 So yeah, I think that was a big leap

148 00:07:58.590 --> 00:08:00.510 for a country like Nepal

149 00:08:00.510 --> 00:08:04.770 and that it is considered one of the successful model.

150 00:08:04.770 --> 00:08:07.950 In fact, the kind of network that it has,

151 00:08:07.950 --> 00:08:11.790 we have like 48,000 volunteers.

152 00:08:11.790 --> 00:08:15.617 In each ward, what is the smallest administrative unit

153 00:08:15.617 --> 00:08:16.450 in Nepal?

154 00:08:16.450 --> 00:08:20.700 In every ward it has one female community health volunteers

155 00:08:20.700 --> 00:08:24.090 who are trained in health.

156 00:08:24.090 --> 00:08:26.430 They get like one month of training

157 00:08:26.430 --> 00:08:30.180 and then are refresher courses every two years.

158 00:08:30.180 --> 00:08:32.370 And these volunteers are connection

159 00:08:32.370 --> 00:08:35.250 between the community and health centers.

160 00:08:35.250 --> 00:08:38.670 And there were the female married,

161 00:08:38.670 --> 00:08:41.790 female of reproductive health who had at least one child

162 00:08:41.790 --> 00:08:45.750 with selected for that volunteer work.

163 00:08:45.750 --> 00:08:50.750 And each woman have, like each volunteer has a network,

164 00:08:51.480 --> 00:08:55.200 a women's group or mother's group in their community.

165 00:08:55.200 --> 00:08:57.840 So whenever someone becomes mother, they join that group

166 00:08:57.840 --> 00:09:02.160 and every month they run health education

167 00:09:02.160 --> 00:09:06.870 or immuno like, and they help with the immunization,

168 00:09:06.870 --> 00:09:09.810 they help with vitamin A distribution in children.

169 00:09:09.810 --> 00:09:13.740 So a lot of community mobilization and social mobilization,

170 00:09:13.740 --> 00:09:17.070 connection of community to the health center.

171 00:09:17.070 --> 00:09:21.660 Each health center has a community-based committee

172 00:09:21.660 --> 00:09:25.620 that has like chairperson of that ward

173 00:09:25.620 --> 00:09:29.130 and then health volunteers like leaders, teachers,

174 00:09:29.130 --> 00:09:31.950 and then they make a joint decisions about the health

175 00:09:31.950 --> 00:09:33.210 of that specific community.

176 00:09:33.210 --> 00:09:36.480 So it's very primary healthcare is very community-based

177 00:09:36.480 --> 00:09:39.000 and it reached to each and every household

178 00:09:39.000 --> 00:09:41.220 and that that is the biggest strength

179 00:09:41.220 --> 00:09:43.380 of the health system in Nepal.

180 00:09:43.380 --> 00:09:46.953 It's quite rare even in the context of low resource setting.

181 00:09:48.870 --> 00:09:52.830 Yeah, and then that has been this network,

182 00:09:52.830 --> 00:09:55.350 also has been now being explored

183 00:09:55.350 --> 00:09:57.963 to deliver the non-communicable diseases.

184 00:10:00.754 --> 00:10:03.960 <v Attendee>Is the 2025 demographic transition,</v>

185 00:10:03.960 --> 00:10:08.254 is that more of like a target or is it more like?

186 00:10:08.254 --> 00:10:10.421 <v ->It's more like forecast?</v>

187 00:10:11.383 --> 00:10:12.683 <v ->I have another question.</v>

188 00:10:13.980 --> 00:10:15.000 It seems like this,

189 00:10:15.000 --> 00:10:18.600 what you've described depends pretty heavily on volunteers,

190 00:10:18.600 --> 00:10:21.330 which from kind of an American point of view,

191 00:10:21.330 --> 00:10:22.470 like it's hard to imagine

192 00:10:22.470 --> 00:10:26.100 that so many people would volunteer and be reliable,

193 00:10:26.100 --> 00:10:28.830 and continue without getting paid.

194 00:10:28.830 --> 00:10:31.080 And is it really true that these volunteers

195 00:10:31.080 --> 00:10:33.270 like are consistently doing this kind of work

196 00:10:33.270 --> 00:10:34.890 and they're not getting paid?

197 00:10:34.890 --> 00:10:37.080 <v ->Yeah, yeah, it's since 1980.</v>

198 00:10:37.080 --> 00:10:40.770 So the first volunteers were recruited in 1984

199 00:10:40.770 --> 00:10:42.600 and since then they have been working

200 00:10:42.600 --> 00:10:45.360 like they are above around 50,000 volunteers

201 00:10:45.360 --> 00:10:47.580 all around Nepal.

202 00:10:47.580 --> 00:10:49.590 And they get paid really, really minimal.

203 00:10:49.590 --> 00:10:54.590 Like the days they work, they get paid about $2.50

204 00:10:54.810 --> 00:10:55.830 for that day.

205 00:10:55.830 --> 00:10:57.423 So let's say if they are,

206 00:10:59.096 --> 00:11:02.070 vitamin A distribution is very successful in Nepal,

207 00:11:02.070 --> 00:11:05.580 like on all on five children get vitamin eight twice a year

208 00:11:05.580 --> 00:11:07.710 and there is a coverage of more than 95%.

209 00:11:07.710 --> 00:11:10.620 And these volunteers do that.

210 00:11:10.620 --> 00:11:14.760 So the day they are distributing vitamin A, they get $2.50.

211 00:11:14.760 --> 00:11:16.860 It's very minimal even in context of them.

212 00:11:19.560 --> 00:11:21.480 And there has been debate whether a government

213 00:11:21.480 --> 00:11:22.920 should pay them or not.

214 00:11:22.920 --> 00:11:25.890 And then with the like expansion of lot

215 00:11:25.890 --> 00:11:27.480 of programs in the health sector

216 00:11:27.480 --> 00:11:30.150 or health sector, like they are considered one

217 00:11:30.150 --> 00:11:33.540 of the biggest liaison between the community

218 00:11:33.540 --> 00:11:34.960 and health center and then

219 00:11:36.900 --> 00:11:40.350 like a role models for awareness raising and all that.

220 00:11:40.350 --> 00:11:44.100 So anyway, so and then this brings to like

221 00:11:44.100 --> 00:11:48.270 how Nepal's health system was like really created

222 00:11:48.270 --> 00:11:49.740 to address maternal child health

223 00:11:49.740 --> 00:11:52.890 and to address the non-communicable diseases.

224 00:11:52.890 --> 00:11:57.890 And then over the last, from 2009 to 2019,

225 00:11:58.140 --> 00:12:02.760 if we look at what has changed, the top 10 cause of death

226 00:12:02.760 --> 00:12:05.070 and disability is still neonatal disorder,

227 00:12:05.070 --> 00:12:10.070 but it has decreased with about 38% in the past decade.

228 00:12:12.180 --> 00:12:15.243 And non-communicable diseases like such as COPD,

229 00:12:16.290 --> 00:12:21.270 ischemic heart disease, stroke, cirrhosis, depression,

230 00:12:21.270 --> 00:12:23.910 low back pain has increased.

231 00:12:23.910 --> 00:12:28.050 So currently, non-communicable diseases

232 00:12:28.050 --> 00:12:31.200 are the number one cause of that in Nepal as well.

233 00:12:31.200 --> 00:12:35.190 And if we look at the risk factors contributing

234 00:12:35.190 --> 00:12:38.790 to these daily, malnutrition is still number one.

235 00:12:38.790 --> 00:12:43.290 But if you look at the change, there is 46% reduction

236 00:12:43.290 --> 00:12:45.843 since 2009 to 2019.

237 00:12:47.070 --> 00:12:48.210 Reduction to air pollution,

238 00:12:48.210 --> 00:12:51.600 but increase in tobacco conjunction, high blood pressure,

239 00:12:51.600 --> 00:12:52.557 the dietary risk.

240 00:12:52.557 --> 00:12:55.383 And if you look at like high body mass index,

241 00:12:56.340 --> 00:13:01.140 like hoping 95% increase from 2009 to 2019.

242 00:13:01.140 --> 00:13:03.900 So these all data indicates towards

243 00:13:03.900 --> 00:13:06.420 like how Nepal is now vulnerable

244 00:13:06.420 --> 00:13:07.920 to the non-communicable disease.

245 00:13:07.920 --> 00:13:10.560 There is existence of dual burden of disease,

246 00:13:10.560 --> 00:13:13.320 like even within a how one household you can find

247 00:13:13.320 --> 00:13:17.730 a malnourished child and overweight mother.

248 00:13:17.730 --> 00:13:22.730 So that's kind of nutrition and epidemiological transition

249 00:13:23.730 --> 00:13:25.383 that our country is facing.

250 00:13:28.290 --> 00:13:32.040 So today, I'm just focusing on three studies

251 00:13:32.040 --> 00:13:35.400 that we are conducting in collaboration

252 00:13:35.400 --> 00:13:37.800 with CMIPS School of Public Health in Nepal.

253 00:13:37.800 --> 00:13:41.920 And these are the three very different kinds of study

254 00:13:42.951 --> 00:13:45.790 all of them like implementation science study

255 00:13:46.847 --> 00:13:51.847 to address non-communicable diseases in some way.

256 00:13:51.960 --> 00:13:56.040 So the first of these studies is the,

257 00:13:56.040 --> 00:13:58.620 we call it Nepal Pioneer Worksite Intervention Study,

258 00:13:58.620 --> 00:14:02.940 that's when we started, it started when I was in Harvard.

259 00:14:02.940 --> 00:14:06.780 Like I remember we, the first conversation was like

260 00:14:06.780 --> 00:14:10.830 as early as in 2015 on November.

261 00:14:10.830 --> 00:14:13.380 I still remember that because I went to Nepal

262 00:14:13.380 --> 00:14:16.950 to explore like what could be done during that time.

263 00:14:16.950 --> 00:14:19.920 And then we came up with this idea

264 00:14:19.920 --> 00:14:23.550 that we already have a lot of evidences

265 00:14:23.550 --> 00:14:26.460 to prove to how to modify the lifestyle

266 00:14:26.460 --> 00:14:28.800 and how the lifestyle modification can contribute

267 00:14:28.800 --> 00:14:30.960 to different diseases like diabetes

268 00:14:30.960 --> 00:14:34.470 and other CVD risk factors.

269 00:14:34.470 --> 00:14:37.410 So we designed this study

270 00:14:37.410 --> 00:14:41.130 to prevent the cardio metabolic disorders

271 00:14:41.130 --> 00:14:42.690 in work site setting.

272 00:14:42.690 --> 00:14:46.020 And then I'll get in details of each of the study briefly.

273 00:14:46.020 --> 00:14:47.760 And the second study was,

274 00:14:47.760 --> 00:14:49.950 it is different from the previous study.

275 00:14:49.950 --> 00:14:53.190 The previous study was more about hybrid design.

276 00:14:53.190 --> 00:14:55.470 We were using the evidence-based intervention,

277 00:14:55.470 --> 00:14:59.880 but we spent a lot of time doing formative study,

278 00:14:59.880 --> 00:15:04.880 contextualizing that information into Nepal's context.

279 00:15:06.240 --> 00:15:08.220 And this is one of the, I think,

280 00:15:08.220 --> 00:15:12.270 one of the biggest areas in implementation science research

281 00:15:12.270 --> 00:15:14.760 the context, how do we understand the context

282 00:15:14.760 --> 00:15:17.700 and how we apply existing evidences

283 00:15:17.700 --> 00:15:19.940 that were proved somewhere else like in the US

284 00:15:19.940 --> 00:15:22.830 in Argentina and Thailand.

285 00:15:22.830 --> 00:15:24.390 And then bring that evidences

286 00:15:24.390 --> 00:15:26.400 and implemented in context of Nepal.

287 00:15:26.400 --> 00:15:28.470 So we did a lot of formative study on around

288 00:15:28.470 --> 00:15:29.700 that developed intervention

289 00:15:29.700 --> 00:15:32.550 and then analyzed its effectiveness.

290 00:15:32.550 --> 00:15:35.760 And second study was to evaluate the package

291 00:15:35.760 --> 00:15:38.100 of essential non-communicable diseases in Nepal.

292 00:15:38.100 --> 00:15:41.670 And this is now completely different intervention

293 00:15:41.670 --> 00:15:46.380 was designed by the international agencies, WHO

294 00:15:46.380 --> 00:15:50.760 and then WHO recommended and advocated this intervention,

295 00:15:50.760 --> 00:15:54.600 Nepal government adopted in 2016, piloted in two districts

296 00:15:54.600 --> 00:15:57.270 and then without evaluating it,

297 00:15:57.270 --> 00:15:59.220 it expanded into 32 district.

298 00:15:59.220 --> 00:16:02.550 Now the plan is to expand to all 77 district

299 00:16:02.550 --> 00:16:06.780 and they have also started ruling out the training,

300 00:16:06.780 --> 00:16:09.150 but nobody really knows what is really happening

301 00:16:09.150 --> 00:16:10.200 after that training.

302 00:16:10.200 --> 00:16:13.320 And after the 2016, is it really working, not working?

303 00:16:13.320 --> 00:16:15.720 What's really happening in that specific context?

304 00:16:15.720 --> 00:16:19.830 So we got R21 forward international grant

305 00:16:19.830 --> 00:16:22.740 to study the current implementation outcomes

306 00:16:22.740 --> 00:16:26.640 of the national program in the pilot districts.

307 00:16:26.640 --> 00:16:31.350 And the third is the cervical cancer prevention program

308 00:16:31.350 --> 00:16:32.250 in low resource setting.

309 00:16:32.250 --> 00:16:34.287 It's also a pilot implementation study

310 00:16:34.287 --> 00:16:37.170 and the implementation is a researcher initiated

311 00:16:37.170 --> 00:16:38.310 into implementation.

312 00:16:38.310 --> 00:16:40.980 So this is like a different touch

313 00:16:40.980 --> 00:16:43.440 in the implementation science area.

314 00:16:43.440 --> 00:16:47.640 So we know that HPV screening works

315 00:16:47.640 --> 00:16:49.190 to prevent the cervical cancer,

316 00:16:50.171 --> 00:16:53.310 but it is has not been done in Nepal.

317 00:16:53.310 --> 00:16:56.640 Only 8% of Nepalese women have currently reported

318 00:16:56.640 --> 00:16:59.310 to ever had any cancer screening.

319 00:16:59.310 --> 00:17:01.200 So there is a huge gap

320 00:17:01.200 --> 00:17:03.330 but there has been a lot of,

321 00:17:03.330 --> 00:17:06.270 there is a national protocol as well

322 00:17:06.270 --> 00:17:10.890 which then that advocates for VIA and SPV testing.

323 00:17:10.890 --> 00:17:15.000 But government doesn't really have any specific plan

324 00:17:15.000 --> 00:17:17.790 of action to how to roll this out in the country.

325 00:17:17.790 --> 00:17:21.600 So we are planning to do a small study

326 00:17:21.600 --> 00:17:25.200 among 1500 women and then collect these information

327 00:17:25.200 --> 00:17:28.380 for government to roll it out throughout Nepal

328 00:17:28.380 --> 00:17:30.600 or throughout a certain parts of the country

329 00:17:30.600 --> 00:17:32.103 where it can work.

330 00:17:36.819 --> 00:17:39.690 So the first study was more contextualizing,

331 00:17:39.690 --> 00:17:41.790 second is like evaluating a national program

332 00:17:41.790 --> 00:17:44.670 that has already been implemented in 30 days

333 00:17:44.670 --> 00:17:47.670 like investigator initiated intervention

334 00:17:47.670 --> 00:17:51.420 and collect information for government to scale up it

335 00:17:51.420 --> 00:17:54.393 in further into in like around the country.

336 00:17:57.720 --> 00:18:00.570 So William, I cannot look at the time

337 00:18:00.570 --> 00:18:02.679 so please keep me posted.

338 00:18:02.679 --> 00:18:05.400 <v Donna>It's only 10:25, so you've got plenty of time.</v>

339 00:18:05.400 --> 00:18:06.630 <v ->Okay, thank you.</v>

340 00:18:06.630 --> 00:18:07.920 So the first study is

341 00:18:07.920 --> 00:18:10.020 the Nepal Pioneer Worksite Intervention Study.

342 00:18:10.020 --> 00:18:13.233 This is a picture of one of the interventions that we did.

343 00:18:14.226 --> 00:18:18.620 So employees in the work sites also got instruction

344 00:18:21.750 --> 00:18:23.670 for physical activity

345 00:18:23.670 --> 00:18:26.823 and we used local resources to do that.

346 00:18:28.290 --> 00:18:29.380 Thank you so much.

347 00:18:31.028 --> 00:18:36.028 So this study was started to assess

348 00:18:38.040 --> 00:18:38.940 what would be the effective

349 00:18:38.940 --> 00:18:42.000 of environmental level intervention alone

350 00:18:42.000 --> 00:18:44.370 and individual level intervention in combination

351 00:18:44.370 --> 00:18:49.140 with environmental level intervention on its effect

352 00:18:49.140 --> 00:18:50.910 on the metabolic risks.

353 00:18:50.910 --> 00:18:55.910 So we had three primary outcomes, glycated, hemoglobin,

354 00:18:58.470 --> 00:19:00.720 systolic blood pressure and triglyceride.

355 00:19:00.720 --> 00:19:03.750 And there's a lot of evidences

356 00:19:03.750 --> 00:19:06.120 like a randomized control trial, meta-analysis

357 00:19:06.120 --> 00:19:09.210 that shows that of diet and physical activity

358 00:19:09.210 --> 00:19:12.360 does reduce the risk of cardiovascular diseases.

359 00:19:12.360 --> 00:19:14.130 And there has been developed a lot of models

360 00:19:14.130 --> 00:19:16.320 to deliver that into community

361 00:19:16.320 --> 00:19:18.120 and in like penetrate in the population.

362 00:19:18.120 --> 00:19:20.020 And one of them is diabetes prevention program,

363 00:19:20.020 --> 00:19:23.370 which is pretty popular and it has been contextualized

364 00:19:23.370 --> 00:19:24.210 in many countries.

365 00:19:24.210 --> 00:19:26.948 So we took that as well.

366 00:19:26.948 --> 00:19:29.790 And behavior change intervention

367 00:19:29.790 --> 00:19:32.550 is also more than individual level effort.

368 00:19:32.550 --> 00:19:36.210 So if we ask people to like eat whole grain

369 00:19:36.210 --> 00:19:38.340 and then the whole grain is not available anywhere

370 00:19:38.340 --> 00:19:43.340 in around and nobody can eat here it, right?

371 00:19:44.280 --> 00:19:47.850 So we were very convinced

372 00:19:47.850 --> 00:19:51.420 that until these healthy foods are available,

373 00:19:51.420 --> 00:19:53.310 people will not be able to eat it.

374 00:19:53.310 --> 00:19:56.880 So one of our biggest challenges was

375 00:19:56.880 --> 00:19:58.230 to make these food available.

376 00:19:58.230 --> 00:20:01.260 So that's how we added the environmental intervention

377 00:20:01.260 --> 00:20:02.640 and we were very interested to know

378 00:20:02.640 --> 00:20:03.900 like what would be the effect

379 00:20:03.900 --> 00:20:06.300 of environmental intervention alone.

380 00:20:06.300 --> 00:20:09.183 So we kind of came up with this study design,

381 00:20:10.500 --> 00:20:13.140 let me explain like why we choose the work site

382 00:20:13.140 --> 00:20:17.580 because employees spent a lot of their waking hours at home

383 00:20:17.580 --> 00:20:21.720 before COVID and hopefully, in the coming days.

384 00:20:21.720 --> 00:20:23.760 And there is also natural environment

385 00:20:23.760 --> 00:20:26.640 for social support within our work site.

386 00:20:26.640 --> 00:20:28.800 And we have an access to adult population

387 00:20:28.800 --> 00:20:33.800 who are at risk to do the non-communicable diseases.

388 00:20:34.920 --> 00:20:37.830 We have this population who are in this formal employment

389 00:20:37.830 --> 00:20:41.070 and we can follow them for years to come.

390 00:20:41.070 --> 00:20:46.050 In Nepal, it is very rare for the employee to quit job

391 00:20:46.050 --> 00:20:48.783 and/or to change job if that they are,

392 00:20:51.870 --> 00:20:53.280 most of them are find their job

393 00:20:53.280 --> 00:20:55.260 in their hometown closer to family.

394 00:20:55.260 --> 00:20:59.550 So it's very rare for people to like change

395 00:20:59.550 --> 00:21:01.350 or like move from town to town in Nepal,

396 00:21:01.350 --> 00:21:05.544 so this was a good setting in that context.

397 00:21:05.544 --> 00:21:10.470 And also it has like formal and informal norms

398 00:21:10.470 --> 00:21:12.480 that could facilitate the healthy choices

399 00:21:12.480 --> 00:21:15.930 and we could have like a protected time

400 00:21:15.930 --> 00:21:19.290 for doing some health education programs if we require.

401 00:21:19.290 --> 00:21:23.640 So work site provided a very good platform for us

402 00:21:23.640 --> 00:21:25.500 to deliver this intervention.

403 00:21:25.500 --> 00:21:27.240 And we opted for

404 00:21:27.240 --> 00:21:29.760 the environmental level works site environment

405 00:21:29.760 --> 00:21:33.930 that included healthy foods in the canteen.

406 00:21:33.930 --> 00:21:37.063 Cafeteria is called canteen in that part of the world.

407 00:21:37.063 --> 00:21:41.010 So healthy food in the canteen and health screenings,

408 00:21:41.010 --> 00:21:44.970 and management support for the lifestyle improvements.

409 00:21:44.970 --> 00:21:47.340 And indeed there was individual level components.

410 00:21:47.340 --> 00:21:49.640 It was based on the diabetes prevention program.

411 00:21:49.640 --> 00:21:52.380 It has like peer lead lifestyle education,

412 00:21:52.380 --> 00:21:54.300 weight-loss and physical activity goals

413 00:21:54.300 --> 00:21:57.360 and 16 core courses, classes,

414 00:21:57.360 --> 00:21:59.163 each class was one hour long.

415 00:22:00.030 --> 00:22:03.900 First 20 minutes was about lecture.

416 00:22:03.900 --> 00:22:07.200 Second 20 minutes was more discussion

417 00:22:07.200 --> 00:22:10.620 about how this lifetime modification is going on

418 00:22:10.620 --> 00:22:13.800 in their life and then experience sharing.

419 00:22:13.800 --> 00:22:16.350 And the third, last minute was physical activity.

420 00:22:16.350 --> 00:22:21.350 They would like come to a place, there was a specific site

421 00:22:21.810 --> 00:22:24.000 that was dedicated for the physical activity

422 00:22:24.000 --> 00:22:25.770 and a physiotherapist would go

423 00:22:25.770 --> 00:22:29.793 and then they do the exercise together for 20 minutes.

424 00:22:30.810 --> 00:22:34.320 And then we conducted the studies in three steps.

425 00:22:34.320 --> 00:22:35.940 The first was formative study

426 00:22:35.940 --> 00:22:39.090 and then designed the intervention based

427 00:22:39.090 --> 00:22:40.290 on the formative study.

428 00:22:40.290 --> 00:22:43.860 Like I would more say like adopt the intervention

429 00:22:43.860 --> 00:22:46.860 and then test its effectiveness.

430 00:22:46.860 --> 00:22:49.020 So we did a lot of things for formative study.

431 00:22:49.020 --> 00:22:51.480 We were concerned about the quality of oil,

432 00:22:51.480 --> 00:22:53.640 so we brought the oil samples from,

433 00:22:53.640 --> 00:22:56.160 there were four canteens in this hospital

434 00:22:56.160 --> 00:22:58.500 where we were doing this study

435 00:22:58.500 --> 00:23:03.300 and we got oil samples from all four canteens,

436 00:23:03.300 --> 00:23:06.360 both used oils as well as unused oil.

437 00:23:06.360 --> 00:23:09.720 And there is this practice of reusing the oil.

438 00:23:09.720 --> 00:23:11.027 So we were concerned

439 00:23:11.027 --> 00:23:13.770 if the reheating or reusing the oil,

440 00:23:13.770 --> 00:23:18.420 it might have an impact on the nutrients, oil nutrients.

441 00:23:18.420 --> 00:23:21.360 So, but then we found that there was not much difference

442 00:23:21.360 --> 00:23:23.310 between the used and unused oil

443 00:23:23.310 --> 00:23:27.157 and they were all using, basically using soya bean oil,

444 00:23:27.157 --> 00:23:30.780 vegetable oil or sunflower oil.

445 00:23:30.780 --> 00:23:35.550 So we decide that we will not do any intervention

446 00:23:35.550 --> 00:23:37.200 for the oil part.

447 00:23:37.200 --> 00:23:39.330 And then the second part was,

448 00:23:39.330 --> 00:23:41.610 which was a big challenge was,

449 00:23:41.610 --> 00:23:44.940 we did a small study among 40 participants

450 00:23:44.940 --> 00:23:48.510 and did brown and white rice tasting.

451 00:23:48.510 --> 00:23:52.080 So we blinded the people, everybody would get white rice

452 00:23:52.080 --> 00:23:55.590 or brown rice in different combination, five combinations.

453 00:23:55.590 --> 00:23:58.770 So, and then that were randomly assigned for each day.

454 00:23:58.770 --> 00:24:03.770 So 25% white rice, 50%, 75%, 100% white rice

455 00:24:04.633 --> 00:24:06.240 or 0% white rice.

456 00:24:06.240 --> 00:24:09.690 And then they would rate after they eat their lunch,

457 00:24:09.690 --> 00:24:11.150 they would rate it in terms of

458 00:24:11.150 --> 00:24:13.830 how do they like overall, appearance,

459 00:24:13.830 --> 00:24:15.690 taste, aroma and texture.

460 00:24:15.690 --> 00:24:20.160 So 100% brown rice was not that much liked,

461 00:24:20.160 --> 00:24:21.870 and then these people are eating brown rice

462 00:24:21.870 --> 00:24:24.450 for the first time, even Nepal has been like,

463 00:24:24.450 --> 00:24:27.210 its stapled food is rice.

464 00:24:27.210 --> 00:24:31.293 Everybody eats rice two times a day and a huge hip of rice.

465 00:24:32.850 --> 00:24:37.850 And then so we took upon the taste and aroma

466 00:24:38.070 --> 00:24:40.797 that were rated for 50% brown and 50% white rice

467 00:24:40.797 --> 00:24:43.230 and 100% white rice were rated similarly.

468 00:24:43.230 --> 00:24:48.230 And then texture was even it's 50/50 was better,

469 00:24:48.570 --> 00:24:50.310 rated better than 100% brown rice.

470 00:24:50.310 --> 00:24:53.610 So we started to introduce the brown rice

471 00:24:53.610 --> 00:24:56.973 by mixing 50% brown rice, 50% white rice in the cafeteria.

472 00:24:58.440 --> 00:25:01.980 And we also conducted the focus group discussions

473 00:25:01.980 --> 00:25:03.660 with the cafeteria clients.

474 00:25:03.660 --> 00:25:06.370 And this paper has been published

475 00:25:07.440 --> 00:25:10.170 and then one of the big major facilitators

476 00:25:10.170 --> 00:25:13.410 was the availability of healthy foods in the cafeteria.

477 00:25:13.410 --> 00:25:15.960 And major barrier was human resources

478 00:25:15.960 --> 00:25:18.930 and lack of knowledge in the canteen,

479 00:25:18.930 --> 00:25:21.933 chef and a person working in the cafeteria,

480 00:25:22.860 --> 00:25:26.010 and then difficulty in changing the food habits.

481 00:25:26.010 --> 00:25:29.040 Like it's food is culture, it's not just a thing

482 00:25:29.040 --> 00:25:33.270 that you eat, it's like it's more into your social structure

483 00:25:33.270 --> 00:25:37.020 and culture so those were identified

484 00:25:37.020 --> 00:25:40.950 and from the canteen operator's point of view,

485 00:25:40.950 --> 00:25:45.090 we found that making profit was not a priority

486 00:25:45.090 --> 00:25:45.990 in that context.

487 00:25:45.990 --> 00:25:48.510 So that was a good facilitator for us.

488 00:25:48.510 --> 00:25:53.510 And they also had a physical facility and commitment,

489 00:25:53.790 --> 00:25:56.130 and the barrier was again the lack of human resources

490 00:25:56.130 --> 00:26:00.900 in the canteen, they were not aware about healthy food

491 00:26:00.900 --> 00:26:03.630 and how to like modify their existing recipe

492 00:26:03.630 --> 00:26:06.150 to convert the food into like healthy options.

493 00:26:06.150 --> 00:26:08.880 And then lastly, we also analyzed the seals

494 00:26:08.880 --> 00:26:11.160 of the cafeteria in the past year.

495 00:26:11.160 --> 00:26:14.070 And then we wanted to focus on those foods

496 00:26:14.070 --> 00:26:18.330 that were being sold in maximum volume.

497 00:26:18.330 --> 00:26:19.790 So we selected like...

498 00:26:22.320 --> 00:26:27.180 We categorized foods into different categories

499 00:26:27.180 --> 00:26:28.830 based on how much were they sold.

500 00:26:28.830 --> 00:26:30.990 And then we focused on those that were sold

501 00:26:30.990 --> 00:26:34.923 like more than 10,000 items in that year.

502 00:26:36.630 --> 00:26:38.400 And based on these information,

503 00:26:38.400 --> 00:26:42.524 we had actually four stakeholders meetings

504 00:26:42.524 --> 00:26:44.820 with the cafeteria manager,

505 00:26:44.820 --> 00:26:48.003 like the administrative director of the hospital.

506 00:26:50.370 --> 00:26:55.370 And then we formed our canteen improvement team

507 00:26:56.610 --> 00:26:59.550 in the hospital and that has like people from finance

508 00:26:59.550 --> 00:27:03.960 because one of the things that we identified

509 00:27:03.960 --> 00:27:06.090 in our formative study was

510 00:27:06.090 --> 00:27:08.370 the people who are making the decision about menu

511 00:27:08.370 --> 00:27:11.070 were the people from finance department

512 00:27:11.070 --> 00:27:14.460 because that had the direct implication on the cost.

513 00:27:14.460 --> 00:27:18.570 And then NCD department, there was a nutritionist involved

514 00:27:18.570 --> 00:27:21.690 and then our study research staff

515 00:27:21.690 --> 00:27:24.240 and consumers were involved and we had, first,

516 00:27:24.240 --> 00:27:26.520 we trained this, we made this kind of team

517 00:27:26.520 --> 00:27:28.120 and then we trained them on what

518 00:27:29.240 --> 00:27:31.710 to make a common understanding of healthy diet,

519 00:27:31.710 --> 00:27:35.220 what are we talking about when we are saying healthy diet?

520 00:27:35.220 --> 00:27:37.830 So there was a lot of differences

521 00:27:37.830 --> 00:27:39.140 in that perception as well.

522 00:27:39.140 --> 00:27:42.300 So we had to get a common understanding on that.

523 00:27:42.300 --> 00:27:43.890 And then we made implementation

524 00:27:43.890 --> 00:27:47.823 and monitoring plan in collaboration with this team.

525 00:27:48.900 --> 00:27:53.160 And then we did three rounds of training

526 00:27:53.160 --> 00:27:57.480 with the cafeteria staffs, specifically shifts.

527 00:27:57.480 --> 00:28:00.600 And then this training would be more interactive,

528 00:28:00.600 --> 00:28:03.600 like interactive conversations

529 00:28:03.600 --> 00:28:07.890 between our research staff and the canteen staff.

530 00:28:07.890 --> 00:28:11.334 And then we focused on healthy eating plate

531 00:28:11.334 --> 00:28:15.690 and then healthy cooking.

532 00:28:15.690 --> 00:28:18.780 And so adding vegetables and fruits wherever possible,

533 00:28:18.780 --> 00:28:20.010 just add fruits and vegetables.

534 00:28:20.010 --> 00:28:22.980 So fruits was not at all available in the canteen

535 00:28:22.980 --> 00:28:24.900 when we started this intervention.

536 00:28:24.900 --> 00:28:27.210 And whole grain was not at all available,

537 00:28:27.210 --> 00:28:29.520 not a single option of whole grains,

538 00:28:29.520 --> 00:28:32.550 and/or using oil, oil was used very evidently,

539 00:28:32.550 --> 00:28:34.533 so we focused on these three things.

540 00:28:36.150 --> 00:28:41.150 And then we did our workshops to determine like what we add

541 00:28:42.630 --> 00:28:45.360 and what we remove from the existing cafeteria.

542 00:28:45.360 --> 00:28:50.360 So we decided to add like fruits, banana

543 00:28:50.460 --> 00:28:51.450 and apple was chosen

544 00:28:51.450 --> 00:28:53.940 because there was no system for refrigeration.

545 00:28:53.940 --> 00:28:56.190 And then these two are like banana would be consumed

546 00:28:56.190 --> 00:28:58.740 on the same day, apple could be stored for a long time.

547 00:28:58.740 --> 00:29:01.230 And then we added whole grains like oats, buckwheat,

548 00:29:01.230 --> 00:29:03.450 whole wheat, roti and then drinks,

549 00:29:03.450 --> 00:29:07.740 water was made available free and whole and vegetables.

550 00:29:07.740 --> 00:29:10.650 So we added salad like cucumber and radish

551 00:29:10.650 --> 00:29:15.650 are very considered, so Nepal salad means cucumber

552 00:29:16.017 --> 00:29:19.712 and radish, it's not like greens like here.

553 00:29:19.712 --> 00:29:23.910 So every meal they would offer either cucumber

554 00:29:23.910 --> 00:29:25.920 or radish on site.

555 00:29:25.920 --> 00:29:30.480 And we introduced popcorn and then for the snack,

556 00:29:31.602 --> 00:29:36.602 we introduced fruits and again water.

557 00:29:36.720 --> 00:29:41.670 And we removed all white bread, puff,

558 00:29:41.670 --> 00:29:45.000 puff is like a croissant and donut,

559 00:29:45.000 --> 00:29:47.043 and then biscuits, cake.

560 00:29:48.030 --> 00:29:51.540 And then we also altered rice.

561 00:29:51.540 --> 00:29:53.760 So we mixed white rice with brown rice

562 00:29:53.760 --> 00:29:57.420 and then we completely got rid of white bread

563 00:29:57.420 --> 00:29:59.940 and then all the sugar-sweetened beverages

564 00:29:59.940 --> 00:30:01.290 were completely off.

565 00:30:01.290 --> 00:30:04.383 So they were not available even if on demands.

566 00:30:11.520 --> 00:30:14.190 And then we did a kickoff event where,

567 00:30:14.190 --> 00:30:17.843 so we made a big fuss of it, we had a kiosk desk

568 00:30:17.843 --> 00:30:21.570 and then we were talking like all the research staff

569 00:30:21.570 --> 00:30:24.120 were talking to the consumers who were dropping

570 00:30:24.120 --> 00:30:26.460 in the canteen, discussing about these changes

571 00:30:26.460 --> 00:30:28.920 like how they felt, like why we are doing the changes.

572 00:30:28.920 --> 00:30:31.740 We made like big posters in the cafeteria

573 00:30:31.740 --> 00:30:33.633 and then why should we,

574 00:30:35.100 --> 00:30:38.400 just basically justifying these interventions.

575 00:30:38.400 --> 00:30:41.640 And then we did a weekly observation checklist

576 00:30:41.640 --> 00:30:43.110 and monthly CIT meetings.

577 00:30:43.110 --> 00:30:46.170 So we would, one of the research staff

578 00:30:46.170 --> 00:30:48.780 and one of the CIT team members would go visit

579 00:30:48.780 --> 00:30:50.730 all of this cafeteria every week

580 00:30:50.730 --> 00:30:55.233 and then see whether it was sustained or not.

581 00:30:56.640 --> 00:31:01.640 And these are some pictures that were some modifications.

582 00:31:02.010 --> 00:31:05.400 So this is like we added oats for breakfast

583 00:31:05.400 --> 00:31:09.330 and then we added this fresh water.

584 00:31:09.330 --> 00:31:11.430 We wanted to make it look beautiful

585 00:31:11.430 --> 00:31:12.540 because we were getting rid

586 00:31:12.540 --> 00:31:15.150 of all of the sugar-sweetened beverages.

587 00:31:15.150 --> 00:31:18.390 And then because there was a lot of pushback

588 00:31:18.390 --> 00:31:20.310 for two things, specifically two things.

589 00:31:20.310 --> 00:31:21.990 One was the sugar-sweetened beverages.

590 00:31:21.990 --> 00:31:24.810 And the second was white rice,

591 00:31:24.810 --> 00:31:26.190 mixing white rice and brown rice.

592 00:31:26.190 --> 00:31:28.860 So a lot of people who are angry for,

593 00:31:28.860 --> 00:31:31.650 because they are so used to eating 100% white rice,

594 00:31:31.650 --> 00:31:34.517 so then we had to add 100% white rice,

595 00:31:34.517 --> 00:31:38.433 but it was not available on the counter,

596 00:31:40.050 --> 00:31:41.910 it was available like behind the scene.

597 00:31:41.910 --> 00:31:42.900 It was not visible.

598 00:31:42.900 --> 00:31:45.030 So only those who really, really wanted would

599 00:31:45.030 --> 00:31:46.320 like ask for the brown rice

600 00:31:46.320 --> 00:31:48.920 and would get like 100% white rice and would get it.

601 00:31:50.790 --> 00:31:52.920 And then the individual level intervention

602 00:31:52.920 --> 00:31:57.120 had 16 core courses like goal setting, stress management,

603 00:31:57.120 --> 00:32:01.980 healthy eating and mostly they had four themes.

604 00:32:01.980 --> 00:32:04.410 So one was healthy eating, promoting healthy eating,

605 00:32:04.410 --> 00:32:09.410 physical activity and demoting alcohol, tobacco and stress.

606 00:32:12.030 --> 00:32:17.030 And so this is the current status of the data.

607 00:32:23.010 --> 00:32:24.540 This is the current status.

608 00:32:24.540 --> 00:32:25.650 Actually we have completed

609 00:32:25.650 --> 00:32:28.380 the behavior intervention as well.

610 00:32:28.380 --> 00:32:30.720 Behavior intervention was randomized,

611 00:32:30.720 --> 00:32:33.300 so everybody received cafeteria intervention.

612 00:32:33.300 --> 00:32:35.970 So all four cafeteria received intervention

613 00:32:35.970 --> 00:32:40.080 and then we measured the outcomes before

614 00:32:40.080 --> 00:32:41.880 and after the cafeteria intervention.

615 00:32:41.880 --> 00:32:43.203 And we also wanted to do,

616 00:32:44.207 --> 00:32:47.310 to compare it with control-timing.

617 00:32:47.310 --> 00:32:48.900 So we did a six month gap.

618 00:32:48.900 --> 00:32:53.760 So we measured the outcomes and then we measured it

619 00:32:53.760 --> 00:32:56.430 after six months without any intervention.

620 00:32:56.430 --> 00:32:59.763 And then six months after the cafeteria intervention.

621 00:33:06.030 --> 00:33:09.030 So this is the baseline characteristics of the participants.

622 00:33:10.020 --> 00:33:14.280 Most of like mean age was 32 years,

623 00:33:14.280 --> 00:33:16.820 most of them were like our ethnic groups.

624 00:33:16.820 --> 00:33:20.280 So that whole town is more predominantly this ethnic group.

625 00:33:20.280 --> 00:33:22.710 I'm also from this ethnic group

626 00:33:22.710 --> 00:33:27.710 and most of them were married, 69%,

627 00:33:27.900 --> 00:33:31.050 like 89% were Hindu religion,

628 00:33:31.050 --> 00:33:33.063 they identified themself as Hindus.

629 00:33:34.530 --> 00:33:38.220 And they had like high school

630 00:33:38.220 --> 00:33:41.730 or more education, more than 76%

631 00:33:43.320 --> 00:33:44.910 because this is the hospital setting,

632 00:33:44.910 --> 00:33:48.513 a lot of them are nurses and doctors, and paramedics.

633 00:33:52.560 --> 00:33:55.440 So after the cafeteria intervention,

634 00:33:55.440 --> 00:33:58.637 this is what we found for the health outcomes.

635 00:34:02.220 --> 00:34:07.020 So systolic blood pressure decreased by 5mm,

636 00:34:07.020 --> 00:34:11.130 just after only screening without even cafeteria

637 00:34:11.130 --> 00:34:15.150 and more after the cafeteria intervention.

638 00:34:15.150 --> 00:34:17.250 So it was at statistically significant.

639 00:34:17.250 --> 00:34:19.650 We saw a statistical significant difference

640 00:34:19.650 --> 00:34:23.010 in systolic blood pressure, diastolic blood pressure

641 00:34:23.010 --> 00:34:26.580 and fasting blood sugar.

642 00:34:26.580 --> 00:34:30.300 So the fasting blood sugar is little bit weird

643 00:34:30.300 --> 00:34:32.250 because in the cafeteria intervention

644 00:34:32.250 --> 00:34:34.960 we saw a little bit increase in fasting blood sugar

645 00:34:36.000 --> 00:34:41.000 and then there was a decrease in low density lipoprotein

646 00:34:41.340 --> 00:34:43.860 and others there was not a significant difference

647 00:34:43.860 --> 00:34:46.443 in other outcomes.

648 00:34:47.700 --> 00:34:48.930 So this is interesting.

649 00:34:48.930 --> 00:34:51.840 So when we look at the whole grains at baseline,

650 00:34:51.840 --> 00:34:55.710 they were only eating like 0.87 servings per week.

651 00:34:55.710 --> 00:34:59.640 At six months, it changed to 0.51 servings per weeks.

652 00:34:59.640 --> 00:35:01.830 And then after the cafeteria intervention

653 00:35:01.830 --> 00:35:04.980 it was 4.22 servings per week.

654 00:35:04.980 --> 00:35:08.430 So it has a, considering that they eat only one meal

655 00:35:08.430 --> 00:35:11.580 in the cafeteria, one or two.

656 00:35:11.580 --> 00:35:13.557 And the decrease in refined grains

657 00:35:13.557 --> 00:35:18.323 are like amazing like about 20, there is 22.8 servings.

658 00:35:18.323 --> 00:35:22.080 Like we eat a lot of refined grains, 22.8 servings

659 00:35:22.080 --> 00:35:24.520 of refined grains per week

660 00:35:25.650 --> 00:35:28.950 and then it decreased to 21.2 servings

661 00:35:28.950 --> 00:35:30.630 of refined grains per week.

662 00:35:30.630 --> 00:35:33.693 There was increase in consumption of fruits and nuts.

663 00:35:37.830 --> 00:35:40.260 And then there was a decrease,

664 00:35:40.260 --> 00:35:41.880 a little bit of decrease in consumption

665 00:35:41.880 --> 00:35:42.960 of sugar-sweetened beverages,

666 00:35:42.960 --> 00:35:45.030 but it was not that statistically significant.

667 00:35:45.030 --> 00:35:49.323 So people were still drinking it outside of the hospital.

668 00:35:52.200 --> 00:35:55.174 So this is like basically our experience

669 00:35:55.174 --> 00:36:00.174 in like how we develop, contextualized this intervention

670 00:36:01.230 --> 00:36:03.990 and what had its effect on change in diet.

671 00:36:03.990 --> 00:36:06.630 Like it definitely had significant contribution

672 00:36:06.630 --> 00:36:09.480 in change in quality of diet

673 00:36:09.480 --> 00:36:13.383 and then few of the health outcomes as well.

674 00:36:15.352 --> 00:36:16.200 <v Donna>I just have a quick,</v>

675 00:36:16.200 --> 00:36:19.530 did you collect data on how much of it was all outside

676 00:36:19.530 --> 00:36:20.820 of the hospital setting

677 00:36:20.820 --> 00:36:22.110 and outside of their work setting?

678 00:36:22.110 --> 00:36:23.730 <v ->Yeah, we do have that.</v> <v ->Whereas, changes made</v>

679 00:36:23.730 --> 00:36:26.823 in the home like shipped in the kind of rice that they had

680 00:36:26.823 --> 00:36:29.010 and other kinds of- <v ->So the total sales</v>

681 00:36:29.010 --> 00:36:31.440 in the cafeteria had not changed.

682 00:36:31.440 --> 00:36:34.320 So there was not a very significant drop.

683 00:36:34.320 --> 00:36:37.801 And that we also asked individually if they had,

684 00:36:37.801 --> 00:36:41.040 how many times did they eat in the cafeteria?

685 00:36:41.040 --> 00:36:45.120 But unfortunately, we didn't ask that in the baseline.

686 00:36:45.120 --> 00:36:46.470 But then the overall

687 00:36:46.470 --> 00:36:49.721 like the food sales when we analyzed the food sales

688 00:36:49.721 --> 00:36:51.840 had not changed in the cafeteria.

689 00:36:51.840 --> 00:36:54.663 So there was no not much drop.

690 00:36:55.860 --> 00:36:57.810 <v ->Well, I think Mayer was asking,</v>

691 00:36:57.810 --> 00:36:59.790 did they change their eating patterns

692 00:36:59.790 --> 00:37:01.412 at home? <v ->Home, oh we didn't...</v>

693 00:37:01.412 --> 00:37:03.240 Oh, sorry, we didn't ask that.

694 00:37:03.240 --> 00:37:04.620 We didn't ask that.

695 00:37:04.620 --> 00:37:06.850 That's a very interesting, though.

696 00:37:07.800 --> 00:37:11.460 So now we have extended this program to schools.

697 00:37:11.460 --> 00:37:13.110 We have enrolled 22 schools

698 00:37:13.110 --> 00:37:15.450 that I have not included in this presentation

699 00:37:15.450 --> 00:37:18.480 and then conducted a randomized control trial among

700 00:37:18.480 --> 00:37:20.730 with this behavior intervention.

701 00:37:20.730 --> 00:37:22.500 We couldn't do the cafeteria intervention,

702 00:37:22.500 --> 00:37:26.460 although it was on the plan because all schools were closed

703 00:37:26.460 --> 00:37:28.980 for the past like one and a half years.

704 00:37:28.980 --> 00:37:31.470 It's still closed in Nepal,

705 00:37:31.470 --> 00:37:33.630 but as soon as it opens we will go

706 00:37:33.630 --> 00:37:36.900 for the cafeteria intervention in this school as well.

707 00:37:36.900 --> 00:37:40.620 So next is to evaluate the package

708 00:37:40.620 --> 00:37:42.150 of essential non-communicable.

709 00:37:42.150 --> 00:37:44.418 I will go a little bit quickly-

710 00:37:44.418 --> 00:37:49.398 <v Donna>(faintly speaking) we have about 15 minutes.</v>

711 00:37:49.398 --> 00:37:51.671 <v ->Yeah, so I'll just give up-</v>

712 00:37:51.671 --> 00:37:53.183 <v Donna>Not that we want you to rush.</v>

713 00:37:53.183 --> 00:37:56.943 <v ->Yeah, we don't have that, so it's just a status.</v>

714 00:37:58.710 --> 00:38:01.950 So as I explained before the WHO proposed

715 00:38:01.950 --> 00:38:04.182 this cost-effective program,

716 00:38:04.182 --> 00:38:06.450 it's called package efficiency of non-communicable diseases.

717 00:38:06.450 --> 00:38:08.397 A lot of LMIC adopted it,

718 00:38:08.397 --> 00:38:11.760 it got very famous in Bhutan as well.

719 00:38:11.760 --> 00:38:16.350 And then Nepal also adopted this and this intervention,

720 00:38:16.350 --> 00:38:19.350 it aims for early detection and modification of risk factors

721 00:38:19.350 --> 00:38:21.990 and avoidable medications for prevention

722 00:38:21.990 --> 00:38:25.530 and treatment of four major NCD, CVD cancer

723 00:38:25.530 --> 00:38:28.020 in Nepal we focus on two cancers, breast cancer

724 00:38:28.020 --> 00:38:29.670 and cervical cancer,

725 00:38:29.670 --> 00:38:32.490 chronic respiratory diseases and diabetes.

726 00:38:32.490 --> 00:38:35.250 And PEN also aims to reinforce health system

727 00:38:35.250 --> 00:38:38.160 and integrated NCD care into the primary healthcare.

728 00:38:38.160 --> 00:38:40.590 Right now, what's happening is NCD care

729 00:38:40.590 --> 00:38:43.680 is very more delivered by the private sector.

730 00:38:43.680 --> 00:38:45.960 It's not integrated into the public sector

731 00:38:45.960 --> 00:38:50.100 and not much was available in primary healthcare

732 00:38:50.100 --> 00:38:51.450 before this program.

733 00:38:51.450 --> 00:38:54.600 And the government endorsed it in the 16

734 00:38:54.600 --> 00:38:57.150 out of 77 districts in 2016

735 00:38:57.150 --> 00:39:01.473 and expanded to 33 district in 2019,

736 00:39:01.473 --> 00:39:04.350 and the program is still in expansion.

737 00:39:04.350 --> 00:39:07.230 So different versions of PEN is available,

738 00:39:07.230 --> 00:39:10.350 so this is for Nepal.

739 00:39:10.350 --> 00:39:12.750 Prevention of heart attacks, stroke and kidney diseases

740 00:39:12.750 --> 00:39:14.370 and focusing on heart attack, stroke,

741 00:39:14.370 --> 00:39:17.040 rheumatic heart disease, diabetes

742 00:39:17.040 --> 00:39:20.220 and chronic respiratory diseases,

743 00:39:20.220 --> 00:39:23.370 management of asthma and chronic respiratory diseases,

744 00:39:23.370 --> 00:39:27.540 and assessment and early diagnosis of cancer.

745 00:39:27.540 --> 00:39:29.580 And it only focuses on breast cancer

746 00:39:29.580 --> 00:39:31.083 and cervical cancer in Nepal.

747 00:39:33.840 --> 00:39:35.560 And then our goal was to measure

748 00:39:36.660 --> 00:39:38.370 these implementation outcomes.

749 00:39:38.370 --> 00:39:40.920 So we were measuring acceptability, adoption,

750 00:39:40.920 --> 00:39:43.410 appropriateness, cost, feasibility, fidelity

751 00:39:43.410 --> 00:39:46.680 and penetration, and sustainability.

752 00:39:46.680 --> 00:39:51.660 And so these, I just wanted to give this example

753 00:39:51.660 --> 00:39:55.110 of how we are measuring it and then we compare it

754 00:39:55.110 --> 00:39:56.940 with the other project that we are doing.

755 00:39:56.940 --> 00:39:59.820 So for the PEN we are mostly doing at the provider level

756 00:39:59.820 --> 00:40:00.930 and health facility level.

757 00:40:00.930 --> 00:40:01.763 For the other study,

758 00:40:01.763 --> 00:40:04.650 we're doing at the individual client level as well.

759 00:40:04.650 --> 00:40:08.010 So like satisfaction of the program itself

760 00:40:08.010 --> 00:40:10.770 and what percent of the health workers

761 00:40:10.770 --> 00:40:12.600 actually completed the training

762 00:40:12.600 --> 00:40:15.060 and what percent of health volunteers

763 00:40:15.060 --> 00:40:17.250 were completed the orientation

764 00:40:17.250 --> 00:40:18.693 and what percent of the PEN,

765 00:40:19.710 --> 00:40:22.293 the clinic did set up the program.

766 00:40:26.173 --> 00:40:28.470 And for the feasibility we were seeing

767 00:40:28.470 --> 00:40:31.080 what percent of the eligible clients were screened

768 00:40:31.080 --> 00:40:34.320 and what percent of the eligible clients were treated

769 00:40:34.320 --> 00:40:37.050 and what percent of the eligible clients were referred.

770 00:40:37.050 --> 00:40:41.040 And for the feasibility, we observed health workers,

771 00:40:41.040 --> 00:40:45.190 whether or not they were following the protocol

772 00:40:46.080 --> 00:40:49.350 on the prevention of heart attack, stroke and kidney disease

773 00:40:49.350 --> 00:40:51.210 and health education and management

774 00:40:51.210 --> 00:40:55.950 of chronic obstructive diseases and assessment of cancer.

775 00:40:55.950 --> 00:40:57.617 And then for the penetration,

776 00:40:57.617 --> 00:41:00.030 we are estimating the percent

777 00:41:00.030 --> 00:41:03.660 of active pain clinics in the past a year.

778 00:41:03.660 --> 00:41:05.610 And for the implementation cost,

779 00:41:05.610 --> 00:41:08.130 we are estimating the capital cost

780 00:41:08.130 --> 00:41:10.800 and then as well as indeed cost from the perspective

781 00:41:10.800 --> 00:41:13.710 of health facility and for the sustainability also,

782 00:41:13.710 --> 00:41:18.710 we will be estimating the annual facility level cost

783 00:41:19.980 --> 00:41:21.753 and reporting system.

784 00:41:23.340 --> 00:41:26.850 And the project right now, we had a target

785 00:41:26.850 --> 00:41:31.560 to do the quantitative assessment of facilities, 106

786 00:41:31.560 --> 00:41:33.060 and then we have achieved that.

787 00:41:33.060 --> 00:41:34.800 We're doing the qualitative interviews

788 00:41:34.800 --> 00:41:37.740 and data analysis is in process.

789 00:41:37.740 --> 00:41:42.330 This is one of the typical health center in western Nepal.

790 00:41:42.330 --> 00:41:44.370 So just to give you like a glimpse

791 00:41:44.370 --> 00:41:47.010 of what we are actually talking about.

792 00:41:47.010 --> 00:41:49.320 And this is like inside the health centers

793 00:41:49.320 --> 00:41:50.880 where we are doing the facility.

794 00:41:50.880 --> 00:41:54.780 So it's nothing close to any smallest clinic

795 00:41:54.780 --> 00:41:56.433 that you would go to in the US,

796 00:41:57.660 --> 00:42:01.413 but it's a very typical in context of Nepal and other NMIC.

797 00:42:02.970 --> 00:42:05.400 So the third is cervical cancer.

798 00:42:05.400 --> 00:42:09.030 Again it was investigator initiated intervention

799 00:42:09.030 --> 00:42:11.580 and then we wanted to collect data

800 00:42:11.580 --> 00:42:13.890 for government to scale it up.

801 00:42:13.890 --> 00:42:17.610 So more in like international guidelines are advocating

802 00:42:17.610 --> 00:42:22.410 for HPV testing, which is considered highly sensitive

803 00:42:22.410 --> 00:42:24.117 and accurate and women also prefer

804 00:42:24.117 --> 00:42:26.040 the self-sample collection,

805 00:42:26.040 --> 00:42:29.130 avoiding the speculum examination in Nepal.

806 00:42:29.130 --> 00:42:31.413 So there has been already conducted a study in Nepal

807 00:42:31.413 --> 00:42:33.990 that women prefer self-sample collection

808 00:42:33.990 --> 00:42:36.690 and that also did in better screening

809 00:42:36.690 --> 00:42:38.433 and covers in context of Nepal.

810 00:42:39.480 --> 00:42:44.460 So again, we are estimating the same implementation metrics,

811 00:42:44.460 --> 00:42:46.337 but in context to the previous study,

812 00:42:46.337 --> 00:42:49.950 we are doing it at in client level and provider's level.

813 00:42:49.950 --> 00:42:52.680 For at the client level, we will measure satisfaction

814 00:42:52.680 --> 00:42:54.000 and partner support.

815 00:42:54.000 --> 00:42:56.943 At the provider's level, we will measure the adoption,

816 00:42:57.810 --> 00:43:00.450 we measure the feasibility at the provider's level

817 00:43:00.450 --> 00:43:02.040 where in the previous study we were doing it

818 00:43:02.040 --> 00:43:03.960 at the health facility level

819 00:43:03.960 --> 00:43:05.850 and then we are measuring the fidelity

820 00:43:05.850 --> 00:43:08.100 at the client's level, whether or not they are following

821 00:43:08.100 --> 00:43:10.800 the protocol for self-sample collection

822 00:43:10.800 --> 00:43:14.730 and home care adherence for post-treatment

823 00:43:14.730 --> 00:43:16.770 and cost for health facility level,

824 00:43:16.770 --> 00:43:19.140 if we are replicating this program,

825 00:43:19.140 --> 00:43:21.990 what would be the cost that or health facility

826 00:43:21.990 --> 00:43:24.060 I will have to incur and sustainability

827 00:43:24.060 --> 00:43:27.900 like what would be the annual cost to sustain this program

828 00:43:27.900 --> 00:43:31.680 and what can be the reporting system

829 00:43:31.680 --> 00:43:33.693 within the government health system?

830 00:43:36.384 --> 00:43:40.080 So we have target to enroll 1500

831 00:43:40.080 --> 00:43:43.230 and then we have completed enrolling 926

832 00:43:43.230 --> 00:43:47.460 self-sample collection has done for 226 women

833 00:43:47.460 --> 00:43:49.830 and we are starting HPV testing this week.

834 00:43:49.830 --> 00:43:53.250 So we really, really excited, we had a meeting this morning

835 00:43:53.250 --> 00:43:55.110 about it and then we will conduct

836 00:43:55.110 --> 00:43:57.810 a follow up survey as well.

837 00:43:57.810 --> 00:44:00.510 And this is the setting that that's,

838 00:44:00.510 --> 00:44:04.320 this is a like, just to give a glimpse of the setting

839 00:44:04.320 --> 00:44:05.160 where we are working.

840 00:44:05.160 --> 00:44:09.720 So these are the women in this municipality

841 00:44:09.720 --> 00:44:14.130 and our health staff visit them and they give them

842 00:44:14.130 --> 00:44:15.780 like instruction, they're reading the instruction

843 00:44:15.780 --> 00:44:17.850 how to collect the self-samples.

844 00:44:17.850 --> 00:44:22.670 So the volunteers, we have network of like 34 volunteers

845 00:44:22.670 --> 00:44:24.060 in that municipality as well.

846 00:44:24.060 --> 00:44:27.330 So we ask them, they facilitate to bring women

847 00:44:27.330 --> 00:44:30.540 in one courtyard we're doing in the open spaces

848 00:44:30.540 --> 00:44:33.930 and then they get the sample collection kit

849 00:44:33.930 --> 00:44:36.420 and then they collect the sample

850 00:44:36.420 --> 00:44:38.910 and give back to our research staff.

851 00:44:38.910 --> 00:44:41.130 And then our research staff is like answering

852 00:44:41.130 --> 00:44:42.360 if they have any questions

853 00:44:42.360 --> 00:44:45.030 and then showing this little pamphlet

854 00:44:45.030 --> 00:44:46.743 about the self-sample collection.

855 00:44:50.340 --> 00:44:53.700 So quickly, I'm not taking much time now.

856 00:44:53.700 --> 00:44:56.340 And then we do have a lot of challenges

857 00:44:56.340 --> 00:45:00.630 to particularly in research,

858 00:45:00.630 --> 00:45:01.920 but I'm not getting into that

859 00:45:01.920 --> 00:45:03.720 like we have limited resources.

860 00:45:03.720 --> 00:45:05.280 We have like geographical challenges,

861 00:45:05.280 --> 00:45:08.280 Nepal's mountainous country, like lack of human resources,

862 00:45:08.280 --> 00:45:09.990 everything, all of that is there.

863 00:45:09.990 --> 00:45:11.493 But today, really wanna focus on

864 00:45:11.493 --> 00:45:14.070 like implementation research challenges.

865 00:45:14.070 --> 00:45:16.668 So first is stakeholder-related

866 00:45:16.668 --> 00:45:18.985 and it's of utmost importance

867 00:45:18.985 --> 00:45:23.280 to engage stakeholders in every process.

868 00:45:23.280 --> 00:45:27.390 And it's like a lot of time that we really need

869 00:45:27.390 --> 00:45:29.460 as an implementation science researchers,

870 00:45:29.460 --> 00:45:31.420 we really need to allocate that time

871 00:45:33.018 --> 00:45:34.470 to engage with stakeholders

872 00:45:34.470 --> 00:45:36.270 and we have to do it in multiple setting.

873 00:45:36.270 --> 00:45:37.380 It's not like one meeting

874 00:45:37.380 --> 00:45:42.132 and then you give information, you collect feedback.

875 00:45:42.132 --> 00:45:46.470 It doesn't work in case of implementation science research,

876 00:45:46.470 --> 00:45:48.720 for example, we spent whole one year

877 00:45:48.720 --> 00:45:51.960 just doing formative study to develop that intervention

878 00:45:51.960 --> 00:45:56.820 and even for the PEN study, we had to collaborate

879 00:45:56.820 --> 00:45:58.710 with the Ministry of Health,

880 00:45:58.710 --> 00:46:00.780 Epidemiologic Disease Control Division

881 00:46:00.780 --> 00:46:02.640 and there was a lot of discussion ongoing.

882 00:46:02.640 --> 00:46:07.640 We made a lot of changes in the design

883 00:46:07.800 --> 00:46:11.520 and we initially planned to do it only 16 districts,

884 00:46:11.520 --> 00:46:13.440 but then because because of their demand,

885 00:46:13.440 --> 00:46:17.790 we added that we did it in all seven provinces

886 00:46:17.790 --> 00:46:18.690 and 32 districts.

887 00:46:18.690 --> 00:46:21.030 So there was a lot of changes in design,

888 00:46:21.030 --> 00:46:23.610 in positive way and it took a lot of time

889 00:46:23.610 --> 00:46:25.230 and it was a little bit complex

890 00:46:25.230 --> 00:46:27.450 because everybody comes with their own agenda

891 00:46:27.450 --> 00:46:29.996 and then call to like to really,

892 00:46:29.996 --> 00:46:34.996 get the buy-in of all of these people from different setting

893 00:46:35.130 --> 00:46:37.920 and bring them into one focus,

894 00:46:37.920 --> 00:46:41.190 into one objective has been a challenging,

895 00:46:41.190 --> 00:46:44.970 but a very good lesson for me overall.

896 00:46:44.970 --> 00:46:48.639 And research has been viewed as like a short-term project,

897 00:46:48.639 --> 00:46:51.210 within implementers as well as the evaluators.

898 00:46:51.210 --> 00:46:54.720 So when we approach any stakeholders, like they were saying,

899 00:46:54.720 --> 00:46:56.220 okay, you collect data for three months

900 00:46:56.220 --> 00:46:59.490 and then you go, so nobody is thinking about

901 00:46:59.490 --> 00:47:01.860 like long-term engagement, long-term partnerships.

902 00:47:01.860 --> 00:47:05.760 And it took some time to like really make them understand

903 00:47:05.760 --> 00:47:08.850 and convince that this is not a one-time event

904 00:47:08.850 --> 00:47:11.790 or even like few times event.

905 00:47:11.790 --> 00:47:15.630 And there has been challenging in health system,

906 00:47:15.630 --> 00:47:18.480 for example, there has been external factors

907 00:47:18.480 --> 00:47:20.370 and then we had to keep changing the study designs.

908 00:47:20.370 --> 00:47:22.350 It's not like a randomized control trial protocol.

909 00:47:22.350 --> 00:47:26.370 You just come with a protocol and do it,

910 00:47:26.370 --> 00:47:27.870 though, it didn't work like that.

911 00:47:27.870 --> 00:47:32.670 So for example, when we were doing the PEN survey,

912 00:47:32.670 --> 00:47:34.080 suddenly the COVID hit us

913 00:47:34.080 --> 00:47:35.610 and then we had to change the strategy

914 00:47:35.610 --> 00:47:37.950 and then there was this big flooding,

915 00:47:37.950 --> 00:47:42.450 and then we had to change the health facilities,

916 00:47:42.450 --> 00:47:45.060 the selected group that we selected randomly,

917 00:47:45.060 --> 00:47:46.890 but we had to exchange it to different

918 00:47:46.890 --> 00:47:48.810 because roads were all blocked.

919 00:47:48.810 --> 00:47:52.743 And then there was this government,

920 00:47:53.868 --> 00:47:56.370 they really after they knew that we are doing this study,

921 00:47:56.370 --> 00:47:59.850 they chipped in, they also added some funding.

922 00:47:59.850 --> 00:48:02.820 Nepal health research council got into

923 00:48:02.820 --> 00:48:04.740 as an official partner of this study

924 00:48:04.740 --> 00:48:07.050 and they wanted to do it faster.

925 00:48:07.050 --> 00:48:12.050 So we had to really like add on like human resource

926 00:48:12.720 --> 00:48:13.590 that they paid for.

927 00:48:13.590 --> 00:48:17.340 So we had like eight resource assistants that were hired.

928 00:48:17.340 --> 00:48:19.230 And what they really wanted to,

929 00:48:19.230 --> 00:48:21.360 because they want to enroll it fast in the country,

930 00:48:21.360 --> 00:48:22.650 they wanted the resource faster.

931 00:48:22.650 --> 00:48:25.830 So they actually paid for eight more resource assistance

932 00:48:25.830 --> 00:48:27.210 and then we had to like change

933 00:48:27.210 --> 00:48:28.860 the whole field plan and everything.

934 00:48:28.860 --> 00:48:30.930 So that's very expected.

935 00:48:30.930 --> 00:48:33.510 And there is a strong bureaucracy in the health system

936 00:48:33.510 --> 00:48:38.130 and that also caused some misunderstandings,

937 00:48:38.130 --> 00:48:40.710 and some delays or there are a lot of transfers happening.

938 00:48:40.710 --> 00:48:42.990 So we engaged with one stakeholder

939 00:48:42.990 --> 00:48:44.820 and that person get transferred or something else,

940 00:48:44.820 --> 00:48:48.990 a new person come in, so it introduces some delays.

941 00:48:48.990 --> 00:48:51.870 And then there is a lack of evaluation plan

942 00:48:51.870 --> 00:48:53.070 within the health program.

943 00:48:53.070 --> 00:48:56.070 So for example, the PEN or HPV screening

944 00:48:56.070 --> 00:48:58.320 within the government sector, they had this program,

945 00:48:58.320 --> 00:49:00.840 but they did have any evaluation plans.

946 00:49:00.840 --> 00:49:05.730 So we had to come, build completely new after the program

947 00:49:05.730 --> 00:49:08.820 has been evaluated, has been like implemented.

948 00:49:08.820 --> 00:49:11.880 So it has some limitations in terms of what kind of the data

949 00:49:11.880 --> 00:49:13.470 that we need and what kind of data

950 00:49:13.470 --> 00:49:15.063 that we collect at that point.

951 00:49:16.920 --> 00:49:19.470 And then the routine healthcare data did not,

952 00:49:19.470 --> 00:49:22.198 was very incomplete and then more often,

953 00:49:22.198 --> 00:49:24.300 it may also be inaccurate.

954 00:49:24.300 --> 00:49:26.550 So for even for the PEN, we wanted to see

955 00:49:26.550 --> 00:49:28.920 what percent of the clients had been screened,

956 00:49:28.920 --> 00:49:31.070 but there was no data available to do that.

957 00:49:33.030 --> 00:49:36.027 And there was some issues with IRB.

958 00:49:36.027 --> 00:49:40.020 IRB was, we had a really long discussions with IRB

959 00:49:40.020 --> 00:49:41.010 because they didn't understand

960 00:49:41.010 --> 00:49:42.630 implementation science research.

961 00:49:42.630 --> 00:49:46.770 In Nepal it's very, very common for IRB

962 00:49:46.770 --> 00:49:48.510 to also give scientific feedback.

963 00:49:48.510 --> 00:49:51.060 So they would say why this many women

964 00:49:51.060 --> 00:49:53.040 that you are recruiting, like why this many things,

965 00:49:53.040 --> 00:49:56.280 why is not there is a control group for the HPV care.

966 00:49:56.280 --> 00:49:58.780 And then we have to do a lot of back and forth

967 00:49:59.940 --> 00:50:04.940 with the IRB and it took quite some time.

968 00:50:06.600 --> 00:50:09.030 And then there was researcher-related,

969 00:50:09.030 --> 00:50:11.640 the people we were hiring in the Nepal

970 00:50:11.640 --> 00:50:12.870 didn't have any background

971 00:50:12.870 --> 00:50:14.730 on implementation science research.

972 00:50:14.730 --> 00:50:17.400 And then we had to like first train them,

973 00:50:17.400 --> 00:50:18.840 they didn't have any experiences.

974 00:50:18.840 --> 00:50:20.070 There was complete disconnect

975 00:50:20.070 --> 00:50:22.080 between the implementing like government agencies

976 00:50:22.080 --> 00:50:23.700 that were implementing the program

977 00:50:23.700 --> 00:50:26.820 and the evaluating bodies that was university-wide

978 00:50:26.820 --> 00:50:31.820 to create these new linkages before we initiate the program.

979 00:50:32.400 --> 00:50:36.480 And then there was this very weird challenge

980 00:50:36.480 --> 00:50:39.370 that we did not have same understanding

981 00:50:40.322 --> 00:50:42.120 of implementation science research

982 00:50:42.120 --> 00:50:44.100 even among the implementation researchers.

983 00:50:44.100 --> 00:50:46.350 So like there was like big pushback

984 00:50:46.350 --> 00:50:48.990 to use any kind of framework, which is we,

985 00:50:48.990 --> 00:50:51.600 as an academician find very rare

986 00:50:51.600 --> 00:50:54.810 because we think that, okay, implementation science

987 00:50:54.810 --> 00:50:56.520 here is a framework

988 00:50:56.520 --> 00:50:58.620 and we give so much emphasis to the framework.

989 00:50:58.620 --> 00:51:00.300 And then there was this group of people

990 00:51:00.300 --> 00:51:03.510 who were implementation scientists

991 00:51:03.510 --> 00:51:05.430 and then they were saying frameworks

992 00:51:05.430 --> 00:51:09.000 are just for academic exercise, we don't use framework.

993 00:51:09.000 --> 00:51:11.910 Like, and then we had to like had two hours conversation

994 00:51:11.910 --> 00:51:14.100 like why we wanna use framework

995 00:51:14.100 --> 00:51:15.600 and like they were debating why

996 00:51:15.600 --> 00:51:17.310 we don't want to use frameworks.

997 00:51:17.310 --> 00:51:22.310 So anyway, so those were I think, were explored on the way.

998 00:51:23.520 --> 00:51:25.950 So there were some opportunities as well.

999 00:51:25.950 --> 00:51:29.010 I think, for me, number one reason

1000 00:51:29.010 --> 00:51:31.170 for pursuing the implementation science is

1001 00:51:31.170 --> 00:51:34.440 it has a potential to make a huge impact on public health.

1002 00:51:34.440 --> 00:51:36.990 There are lots of promising research areas.

1003 00:51:36.990 --> 00:51:39.000 Nothing is really happening in the context

1004 00:51:39.000 --> 00:51:42.720 of implementation science research, so we can do a lot.

1005 00:51:42.720 --> 00:51:44.940 And there is a like real need

1006 00:51:44.940 --> 00:51:47.430 to embed this implementation science within healthcare

1007 00:51:47.430 --> 00:51:49.680 because healthcare program are running on their own.

1008 00:51:49.680 --> 00:51:50.940 They are never evaluated.

1009 00:51:50.940 --> 00:51:54.810 Like nobody really knows what's really going on

1010 00:51:54.810 --> 00:51:58.140 because there is no activate proper data system

1011 00:51:58.140 --> 00:52:01.320 or analyze mechanism, or feedback system.

1012 00:52:01.320 --> 00:52:06.320 So I see them as this is a limitation

1013 00:52:06.540 --> 00:52:07.890 to do the study right now,

1014 00:52:07.890 --> 00:52:10.680 but I see them as a big opportunity for us.

1015 00:52:10.680 --> 00:52:13.320 And then we can have a really, really big leap

1016 00:52:13.320 --> 00:52:16.953 in this context of LMIC.

1017 00:52:17.970 --> 00:52:21.660 And so compared to 10 years ago,

1018 00:52:21.660 --> 00:52:24.450 even like when we were starting Donna in 2015,

1019 00:52:24.450 --> 00:52:27.360 there was not that much of resources on IS

1020 00:52:27.360 --> 00:52:31.380 and now we have all of these worldwide IS networkings

1021 00:52:31.380 --> 00:52:34.770 within the LMIC, I'm part of two of such networks

1022 00:52:34.770 --> 00:52:37.620 and there is a growing interest from funding agency,

1023 00:52:37.620 --> 00:52:39.780 NIH like National Cancer Institute

1024 00:52:39.780 --> 00:52:43.630 has this big interest in implementation science.

1025 00:52:43.630 --> 00:52:45.780 NHLBI is taking a lot of interest.

1026 00:52:45.780 --> 00:52:47.580 There is interest from Gates Foundation,

1027 00:52:47.580 --> 00:52:50.250 we got a smaller grant from Resolve to Care,

1028 00:52:50.250 --> 00:52:52.260 another organization and there is also a lot

1029 00:52:52.260 --> 00:52:55.293 of interest at the local level from WHO.

1030 00:52:55.293 --> 00:52:58.170 WHO also chipped in

1031 00:52:58.170 --> 00:53:02.550 in our PEN implementation evaluating program.

1032 00:53:02.550 --> 00:53:06.000 And there is also a big opportunity

1033 00:53:06.000 --> 00:53:07.380 in the program evaluation funding

1034 00:53:07.380 --> 00:53:11.073 from non-government organization if we want to explore that.

1035 00:53:12.090 --> 00:53:14.580 And there are also training opportunities available.

1036 00:53:14.580 --> 00:53:15.600 A lot of available,

1037 00:53:15.600 --> 00:53:18.300 a lot of free resources is available online.

1038 00:53:18.300 --> 00:53:21.390 And then in our master of science in public health course

1039 00:53:21.390 --> 00:53:24.900 we also offer two credit course on implementation science

1040 00:53:24.900 --> 00:53:28.050 that our student can take and other researchers

1041 00:53:28.050 --> 00:53:30.690 all over Nepal can also take that course.

1042 00:53:30.690 --> 00:53:33.840 So with that, I would really like to thank you all

1043 00:53:33.840 --> 00:53:37.950 for your time and really nice to be here.

1044 00:53:37.950 --> 00:53:40.893 This is one of the typical mountain village in Nepal.

1045 00:53:42.600 --> 00:53:43.850 <v Donna>Thanks so much.</v>

1046 00:53:48.163 --> 00:53:50.730 So I think Luke Davis has a question.

1047 00:53:50.730 --> 00:53:53.102 We don't really have a lot of time just one-

1048 00:53:53.102 --> 00:53:55.529 (speaker faintly speaking)

1049 00:53:55.529 --> 00:53:58.050 <v ->Okay, well, why don't we let Luke ask his question</v>

1050 00:53:58.050 --> 00:53:59.840 if Luke, if you're still...

1051 00:54:01.170 --> 00:54:02.430 Luke, if you're still here,

1052 00:54:02.430 --> 00:54:04.710 we'd love to have you ask your question

1053 00:54:04.710 --> 00:54:06.960 and then I think we probably have to wrap up.

1054 00:54:07.860 --> 00:54:10.500 <v ->Great, it's kind of a big question so-</v>

1055 00:54:10.500 --> 00:54:12.870 <v ->We can't hear you, oh there you go.</v>

1056 00:54:12.870 --> 00:54:15.450 <v ->I'll just share it and perhaps we'll have a chance</v>

1057 00:54:15.450 --> 00:54:17.430 to talk more when we meet on Friday

1058 00:54:17.430 --> 00:54:18.870 or when we meet in person Archana.

1059 00:54:18.870 --> 00:54:21.450 But I think the general question is

1060 00:54:21.450 --> 00:54:25.110 how do you collect implementation measures such as fidelity

1061 00:54:25.110 --> 00:54:27.720 in a real world setting without interrupting that setting?

1062 00:54:27.720 --> 00:54:29.370 I think that's the big question you gave,

1063 00:54:29.370 --> 00:54:31.320 I think some examples of the challenges,

1064 00:54:31.320 --> 00:54:33.390 but it'd be really fun to hear,

1065 00:54:33.390 --> 00:54:35.220 you know, if you just have one brief example

1066 00:54:35.220 --> 00:54:36.750 or how you've been able to do it

1067 00:54:36.750 --> 00:54:39.930 'cause you've obviously figured out how to do it

1068 00:54:39.930 --> 00:54:41.220 for lots of different conditions.

1069 00:54:41.220 --> 00:54:43.020 So thanks so much for the talk.

1070 00:54:43.020 --> 00:54:44.220 <v ->Yeah, thank you.</v>

1071 00:54:44.220 --> 00:54:46.620 Thank you Luke, really nice question.

1072 00:54:46.620 --> 00:54:50.070 We struggled a lot to do, to collect the fidelity

1073 00:54:50.070 --> 00:54:52.410 of our PEN protocol implementation.

1074 00:54:52.410 --> 00:54:56.340 And then we discussed a lot among ourselves

1075 00:54:56.340 --> 00:54:58.230 and with staff how we can do it.

1076 00:54:58.230 --> 00:55:00.270 So one of the things that we decided

1077 00:55:00.270 --> 00:55:02.850 before we get in the field, we decided that

1078 00:55:02.850 --> 00:55:06.270 we will just let the health workers know

1079 00:55:06.270 --> 00:55:09.870 that we are observing them and then assessing the fidelity,

1080 00:55:09.870 --> 00:55:13.260 but would not tell like which exact patient

1081 00:55:13.260 --> 00:55:15.720 and we will like observe them from a distance

1082 00:55:15.720 --> 00:55:18.603 and we would obviously get their consent.

1083 00:55:19.620 --> 00:55:22.950 So, and then we did that approach

1084 00:55:22.950 --> 00:55:27.360 and then when the feedback from the field work came up,

1085 00:55:27.360 --> 00:55:30.660 it was like in Nepal, they were so busy.

1086 00:55:30.660 --> 00:55:34.200 Like they didn't care about altering,

1087 00:55:34.200 --> 00:55:35.790 that was the general impression.

1088 00:55:35.790 --> 00:55:38.580 They were so busy, like they didn't care

1089 00:55:38.580 --> 00:55:41.250 about our assessment at all. (chuckles)

1090 00:55:41.250 --> 00:55:45.167 So it was good for us,

1091 00:55:45.167 --> 00:55:49.440 but it is good for the health system.

1092 00:55:49.440 --> 00:55:51.240 So one of the things that we did,

1093 00:55:51.240 --> 00:55:55.785 but yeah, of course, I think even after that

1094 00:55:55.785 --> 00:56:00.785 it would be a difficult, it's pretty challenging to do that.

1095 00:56:04.470 --> 00:56:06.071 <v ->Great, thanks.</v>

1096 00:56:06.071 --> 00:56:08.640 (Donna faintly speaking)

1097 00:56:08.640 --> 00:56:12.510 <v ->I think we probably need to conclude given the time,</v>

1098 00:56:12.510 --> 00:56:15.837 but I can see on the chat that many people are Archana

1099 00:56:15.837 --> 00:56:18.330 are writing to thank you for the talk

1100 00:56:18.330 --> 00:56:21.480 and note how, what an insightful

1101 00:56:21.480 --> 00:56:23.520 and excellent presentation it was.

1102 00:56:23.520 --> 00:56:26.010 And I know you'll be meeting with many of us

1103 00:56:26.010 --> 00:56:28.350 and you've met with many of us before

1104 00:56:28.350 --> 00:56:30.930 and as I mentioned, there's still opportunities

1105 00:56:30.930 --> 00:56:33.900 for people who have things they'd like to discuss

1106 00:56:33.900 --> 00:56:38.430 with Archana to connect with William and try to find a time.

1107 00:56:38.430 --> 00:56:41.280 So thank you all and have a good rest of your day.

1108 00:56:41.280 --> 00:56:42.280 <v ->Thank you.</v> <v ->Bye.</v>