

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
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 re-
6 00:00:14.190 --> 00:00:16.380 search projects
7 00:00:16.380 --> 00:00:19.590 to prevent non-communicable diseases,
8 00:00:19.590 --> 00:00:21.480 including cervical cancer, cardiovascular disease
9 00:00:21.480 --> 00:00:25.080 and diabetes.
10 00:00:25.080 --> 00:00:29.130 She and I have been working together for the
11 00:00:29.130 --> 00:00:32.670 past six years.
12 00:00:32.670 --> 00:00:35.820 She originally came to work with me when I
13 00:00:35.820 --> 00:00:38.160 was at Harvard
14 00:00:38.160 --> 00:00:41.670 as a part of my NIH Director's Pioneer Award,
15 00:00:41.670 --> 00:00:45.690 and we started to develop some of these research
16 00:00:45.690 --> 00:00:48.570 projects
17 00:00:48.570 --> 00:00:52.710 that Dr. Shrestha is gonna talk about.
18 00:00:52.710 --> 00:00:55.710 But she's also gone off in her own directions as
19 00:00:55.710 --> 00:00:58.650 well.
20 00:00:58.650 --> 00:01:00.840 And we've continued to work together, we're
21 00:01:00.840 --> 00:01:04.710 co-PIs,
22 00:01:04.710 --> 00:01:09.710 or I'm site PI of multiple grants
that she has led the submission of and succeeded in winning.
And it's a very productive relationship.
We've had many, many papers published.
She's also an Adjunct Assistant Professor
in our Chronic Disease Epidemiology Department here at Yale.
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 re-
search
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 grow-
ing.
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 spe-
cific 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 environ-
ment
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 im-
provements.
409 00:21:44.970 --> 00:21:47.340 And indeed there was individual level compo-
nents.
410 00:21:47.340 --> 00:21:49.640 It was based on the diabetes prevention pro-
gram.
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 activ-
ity.
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 interven-
tion
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 nu-
tritionist 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, to-
bacco 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 inter-
vention.

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 themselves 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 health-care

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 exam-
753 00:39:51.660 --> 00:39:55.110 of how we are measuring it and then we com-
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
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
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
768 00:40:31.080 --> 00:40:34.320 and what percent of the eligible clients were
769 00:40:34.320 --> 00:40:37.050 and what percent of the eligible clients were
770 00:40:37.050 --> 00:40:41.040 And for the feasibility, we observed health
771 00:40:41.040 --> 00:40:45.190 whether or not they were following the proto-
772 00:40:46.080 --> 00:40:49.350 on the prevention of heart attack, stroke and
773 00:40:49.350 --> 00:40:51.000 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 imple-
mentation 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 satis-
faction
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 instruc-
tion
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 proto-
col.
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 frame-
work.
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 ex-
plored 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>