Application of Motivational Interviewing (MI) Strategies with the Extended Parallel Process Model (EPPM) to Improve Risk Communication for Parents of Children with Familial Hypercholesterolemia

Bridget Winchester, MS, CGC, Krista Redlinger-Grosse, PhD, LP, ScM, LGC, Ian M. MacFarlane, PhD, Scott T. Walters, PhD, Erin Ash, MS, LGC, Patricia McCarthy Veach, PhD, LP, Emma Baldry, BS, Deborah Cragun Ph.D, MS, CGC, Heather Zierhut, PhD, MS, LGC


Background
Positive health outcomes rely on family communication, especially for hereditary conditions.
- Facilitate the delivery of genetic information is described as both a benefit and outcome of genetic counseling, and yet, traditional interactive counseling strategies do not increase risk communication.

Motivational Interviewing (MI) is a client-centered communication style that elicits and builds motivation for change.

In this study, we used MI and the Extended Parallel Process Model (EPPM) to improve the identification of high risk individuals.

Methodology
1. Intervention Guide
2. MI Intervention protocol including: pre-survey, phone call intervention (mean duration of 54 minutes), 2 post surveys (1 & 6 months, n=12).
3. Recruitment
2 Phase recruitment through UMN Lipidology clinic & FH Foundation via incis, letter, and newsletter.

3. Directed content analysis
Via the Motivational Interviewing Skill Code version 2.1 (MISC 2.1) framework and GQR International’s Mind 12 qualitative data analysis software.

4. Inductive Thematic Analysis
- Identified prominent MI and EPPM codes for emergent themes with self-motivating statements (change talk) and risk communication.

5. Statistical Analysis
- Analysis of variance (ANOVA) to assess for effect size
- Analysis of frequency (ANOVA) was conducted to assess the impact on each EPPM construct on participant change talk.

Results & Discussion
- 4 out of 12 available (33%) participants communicated to additional relatives during our intervention.
- There was a very large effect size (η^2=0.43) which was driven by the difference in change talk when discussing perceived susceptibility of family members (η^2=0.41).

- Two participants who communicated to additional relatives throughout our GC intervention. (Fig. 1).

- Separated by the 4 phases of the EPPM, we saw an increase of change talk responses throughout our GC intervention (Fig. 2).

- Underestimation of Risk Severity
P11, OBP: “...for some reason during that period of time they said: ‘oh they're just, they're too young it's not a big deal’ (Other 1).
P6, FH+: “...i mean people take it lightly 'th you have high cholesterol you're on statins but nobody looks at the impact it has on your quality of life or your functioning of life, you just learn to push through.” (Reason +)

- Motivators to Communication
P6, FH+: “...well, I wonder if my sister has had her kids screened and I think that would probably I would encourage him to have a conversation with her about it...they're not really very proactive typically so I just wonder if if she's ever had her kids screened” (Talking Steps)
GC: “It's kind of hard to think if I realized that with my kids I think that would probably I would encourage him to have a conversation with her about it...they're not really very proactive typically so I just wonder if if she's ever had her kids screened” (Talking Steps)

- Lack of Outward Differences Can Be Deceiving
P12, OBP: “...my youngest as I've mentioned has type 1 diabetes, so her risk profile is more hour by hour with insulin so we really don't have that much to communicate about this, given that she's taking Statin once a night, that's sort of an easy thing for her...
Reason +

- Barriers to Communication
P11, OBP: “...for some reason during that period of time they said: ‘oh they're just, they're too young it's not a big deal’ (Other 1).

- Positive health outcomes rely on family communication,
- Familial Hypercholesterolemia (FH) is an AD condition that affects 1/250 individuals, with only 1/3 of index patients communicating to additional relatives.

- Several known common motivators and barriers to risk communication, and yet, traditional interactive counseling strategies do not increase risk communication.

Conclusions & Limitations
- The first GC-MI intervention developed for FH
- These significant communication and environmental context barriers to overcome for FH
- Our study had a comparable increase in communication to other interventions, such as letters and videos, that attempt to increase risk communication about genetic conditions
- Perceived susceptibility may be a motivating factor to increase communication. Further research is needed.

Limitations
- Small sample with no randomization of control group to evaluate efficacy completely
- Motivated participants - already have increased severity/perceived susceptibility?
- Variability in interventions (semi-structured)
- Variability in time since diagnosis
- Potential discrepancies between neutral and change talk (tional differences of participants)

Practical Implications
- MI approaches are needed to increase risk communication and cascade screening for FH
- May suggest the need for increased MI education and training in GC programs

References