Evaluation Approach: Delphi Instrument for Hospital-Based Domestic Violence Programs

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• Healthcare-based domestic violence (DV) interventions are best viewed as *programs*, with numerous components, designed to promote systematic improvement in early identification and service provision

_Improving the Health Care Response to Domestic Violence_
Family Violence Prevention Fund; April, 1998
Common Program Objectives

- More knowledgeable, empathic providers
- User-friendly environment
- Early identification & recognition
- Willingness to discuss
- Emotional support

- Provide information & access to services
- Risk assessment
- Proper documentation
- Avoid causing harm
- Provide quality services
Common Program Components

• Training of healthcare providers
• Establishment of DV task force or team
• Establishment of DV-specific policies and procedures
• Environmental modifications
• Routine assessment for victimization
• Intervention services
Measuring the Quality of Health Care - Donabedian Model

- Structure - is there a program?
- Process - what is it doing?
- Outcomes - what is the effect?
Program Structure

Structure refers to attributes of the settings in which care occurs. This includes the attributes of material resources (facilities, equipment, money), of human resources (number & qualifications of personnel), and of organizational structure.
Program Process

Process refers to what is actually done in giving and receiving care. It includes the practitioner’s activities in making a diagnosis, documenting their findings, and implementing treatment.
Program Outcome

Outcome refers to the effects of the program on the outcomes of interest, which usually include morbidity, mortality, quality of life, healthcare utilization, and healthcare costs.
Health Services Paradigm

Programs with good **structure** in place will have an increased likelihood of good **process** of care, and good process increases the likelihood of good **outcome**

Structure → Process → Outcome
Caveats

• Having good structure in place is not sufficient - it must facilitate good process.
• Good structure and process do not guarantee success, but they increase the likelihood of successful outcomes.
• Inadequate structures and poor process is likely to result in poor outcomes.
Examples of Structure & Process Assessments

• Joint Commission Standards
• Trauma Systems Standards
• Designated Cardiac and Stroke Treatment Centers
  – Cardiac cath lab availability
  – Interventional radiology
  – Door-to-balloon time of 60 minutes
Measuring the Quality of Domestic Violence Services in Healthcare Setting

- **Structure** - is there a domestic violence program?
- **Process** - what is the program and how well has it been implemented?
- **Outcome** - what are the effects of the program?
  - Intermediate measures
  - Long-term health and safety measures
Assessing Your Program

• Are we achieving the recommended best practices?
• Have we established a program likely to improve the health of DV victims?
Structure: DV Healthcare Programs - Common Features

- Training of healthcare providers
- Establishment of DV task force or team
- Establishment of DV-specific policies and procedures
- Environmental modifications
- Routine assessment for victimization
- Intervention services
Process: Program Implementation

• Example #1 - Training healthcare providers
  – Qualifications of trainer?
  – Quality of training material?
  – Time devoted to training?
  – Percentage of staff trained? Medical staff? Housestaff? New hires, all shifts?
  – Evaluation of training?
Process: Program Implementation

• Example #2 - Environmental modifications
  – Availability and visibility of DV-related posters, brochures, patient information, buttons, hotline numbers? Quantity, quality, and location of materials?
  – Security procedures?
  – Privacy of screening process?
Process: Program Implementation

• Example #3 - Intervention services
  – who provides the intervention? Qualifications and experience? RN, social worker, advocate?
  – On-site service provider? Hours of coverage?
  – Standardized intervention protocol?
  – Referral, counseling, advocacy, legal options, safety plan, shelter, transportation, etc.
Why Study the Structure and Process of DV Programs?

• Determine how well a program has been implemented at a site.
• Permit comparisons of different programs across sites.
• Determine which program features are most important in producing positive outcomes.
• Assist administrators, advocates, program managers, and researchers.
“Health care produces only 10% of health outcome. Other factors such as lifestyle, genetics, stress, and environment are responsible for the other 90%. So what should providers be held accountable for, in delivery of health care?...
...Process is what should be paid for, not outcome. You should be paid for the probability of a better outcome through the process of health care”

Uwe Reinhart, PhD

JAMA, 1/9/02
DV Program Delphi Instrument

• Designed to measure the quality of DV program implementation.
• Examines important structures and process measures.
• Answer the question - how well has the program been implemented?
• Based upon consensus achieved by 18 national experts
DV Program Delphi Instrument

- 37 specific performance measures
- Grouped within 9 categories (domains)
- Weighted based upon perceived importance
- Excellent inter-rater reliability achieved (Kronbach’s alpha ranging from 0.97-0.99 in experienced coders and 0.96-0.99 in inexperienced coders)
- Criterion-related validity correlation = 0.65 (p<0.01)
  - Coben JH. Academic Emergency Medicine, November, 2002
Domains of Program Activities

- Policies & Procedures
- Physical Environment
- Cultural Environment
- Training of Providers
- Screening & Safety Assessment
- Documentation
- Intervention Services
- Evaluation Activities
- Collaboration
Instrument Development

• Performance measures re-framed as assessment questions.
• Possible response categories to each question.
• Scoring system based upon weights assigned by panelists.
CATEGORY 2: HOSPITAL PHYSICAL ENVIRONMENT

2.1 Are there posters and/or brochures related to domestic violence on public display in the hospital?
No (0) Yes (0)

If yes, list total number of locations (up to 35): (____)

2.2 Is there referral information (local, state, or national phone numbers) related to domestic violence services on public display in the hospital? (Can be included on the posters/brochure noted above).
No (0) Yes (0)

If yes, list total number locations (up to 35): (____)

2.3 Does the hospital provide temporary (<24 hours) safe shelter for victims of domestic violence that cannot go home or cannot be placed in a community-based shelter?
If yes: (choose one)
No (0) Yes (0)

a) Victims are permitted to stay in ED until placement is secured. Yes (15)

b) Victims are provided with safe respite room, separate from ED, until placement is secured. Yes (25)

c) In-patient beds are available for victims until placement is secured. Yes (30)

TOTAL SCORE FOR CATEGORY 2 (SUM ALL POINTS) =
Examples of Use

- Statewide evaluation of Pennsylvania programs
- Kansas City Metro Hospitals
- New Zealand nationwide evaluation
Delphi Instrument Scores - Category 1
Hospital Policies and Procedures

Mean = 42.9
Median = 40.0
SD = 21.3
Delphi Instrument Scores - Category 2
Hospital Physical Environment

Mean = 39.3
Median = 36.0
SD = 27.5
Delphi Instrument Scores - Category 3
Hospital Cultural Environment

Mean = 42.0
Median = 41.5
SD = 16.2
Delphi Instrument Scores - Category 4
Training of Providers

Mean = 67.2
Median = 71.5
SD = 21.7
Delphi Instrument Scores - Category 5
Screening and Safety Assessment

Mean = 35.3
Median = 28.5
SD = 26.2
Delphi Instrument Scores - Category 6

Mean = 40.0
Median = 45.0
SD = 25.3
Delphi Instrument Scores - Category 7 Intervention Services

Mean = 57.3
Median = 56.0
SD = 19.0
Delphi Instrument Scores - Category 8 Evaluation Activities

Mean = 45.2
Median = 43.5
SD = 34.3
Delphi Instrument Scores - Category 9 Collaboration

Mean = 60.2
Median = 65.5
SD = 18.2
Total Score on Delphi Instrument by Duration of Program

- All sites (n=34): mean score = 50.6
- 1\textsuperscript{st} year sites (n=17): mean score = 46.6
- 3\textsuperscript{rd} year sites (n=11): mean score = 49.1
- > 6\textsuperscript{th} year sites (n=5): mean score = 66.0
Table 1. Delphi Scores by Domain and Evaluation Year

<table>
<thead>
<tr>
<th>Domain</th>
<th>Year 1 Scores (n=34)</th>
<th>Year 2 Scores (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (Std Deviation)</td>
<td>Mean (Std Deviation)</td>
</tr>
<tr>
<td>1</td>
<td>Policies and Procedures</td>
<td>43.1 (19.6)</td>
</tr>
<tr>
<td>2</td>
<td>Physical Environment</td>
<td>44.0 (29.2)</td>
</tr>
<tr>
<td>3</td>
<td>Cultural Environment</td>
<td>40.6 (16.6)</td>
</tr>
<tr>
<td>4</td>
<td>Training of Providers</td>
<td>66.6 (24.3)</td>
</tr>
<tr>
<td>5</td>
<td>Screening</td>
<td>41.7 (27.8)</td>
</tr>
<tr>
<td>6</td>
<td>Documentation</td>
<td>45.2 (26.1)</td>
</tr>
<tr>
<td>7</td>
<td>Intervention Services</td>
<td>57.7 (18.9)</td>
</tr>
<tr>
<td>8</td>
<td>Evaluation Activities</td>
<td>50.3 (33.0)</td>
</tr>
<tr>
<td>9</td>
<td>Collaboration</td>
<td>60.1 (19.1)</td>
</tr>
<tr>
<td></td>
<td>Total weighted mean score</td>
<td>50.6 (14.7)</td>
</tr>
</tbody>
</table>

* = significant difference between years, p< .01

** = significant difference between years, p< .05
Hospital-based DV Program Evaluation
“8/01” & 8/02
Overall Scores

![Bar Chart]

- 2001: 12
- 2002: 63
Hospital-based DV Program Evaluation
“8/01” & 8/02
Factor Scores

Bar chart showing factor scores for 2001 and 2002.

- Policies & procedures: 2001 - 3, 2002 - 21
- Physical environment: 2001 - 15, 2002 - 22
- Cultural environment: 2001 - 17, 2002 - 67
- Provider training: 2001 - 0, 2002 - 81
- Screening/safety assmt: 2001 - 4, 2002 - 38
- Documentation: 2001 - 10, 2002 - 76
- Intervention services: 2001 - 16, 2002 - 72
- Evaluation: 2001 - 0, 2002 - 71
- Collaboration: 2001 - 0, 2002 - 60
To improve our score we would need to:

<table>
<thead>
<tr>
<th>Category</th>
<th>Improvements needed</th>
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</thead>
<tbody>
<tr>
<td>Hospital Policies &amp; Procedures</td>
<td>Institute official written policy regarding the assessment and treatment of DV victims. Policy should include: definition of DV, mandate training for staff, advocate universal screening, define who is responsible for screening, and address documentation, referral of victims and legal reporting requirements. Provide administrative enforcement procedures to ensure screening (chart audits, positive reinforcers to promote and punitive measures for lack of screening)</td>
</tr>
<tr>
<td>Hospital Physical Environment</td>
<td>More display of DV posters/brochures More referral info available to patients (can be on posters/brochures) [Provide temporary (&lt;24 hrs) safe shelter for victims of DV who cannot go home or be placed in shelter yet]</td>
</tr>
</tbody>
</table>
Summary - Delphi Instrument

• Can be used to provide benchmarks or objectives for program achievement.
• Measure and track site progress over time.
• Compare programs across sites.
• Can help determine most important program components, if linked to outcome data.