Use of evidence-based models and standardization of PCM programs: What is the practice?

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PCM: An overview

- Prenatal case management (PCM) is a community-based, health-related service for high risk pregnant women
  - Increase utilization of health and social services
  - Goal is to improve birth and early infancy outcomes
- Research on effectiveness exists
  - Nurse-Family Partnership[1] - home visiting by RNs
  - Quintessential public health nursing

1. Olds, et al. (1997).Long-term effects of home visitation on maternal life course and child abuse and neglect. *JAMA*, 278, 637-643.

Background

- Limited, anecdotal evidence of inconsistencies across PCM programs[2]

- Inconsistencies may stem from:
  - Lack of basis in EB models or program theory
  - Lack of formalization of policies and procedures

2. Foxcroft, et al. (2004). Organisational infrastructures to promote evidence based nursing. *The Cochrane Database of Systemic Reviews, 1.*

Research questions

This secondary data analysis sought to answer the following questions:

1) To what extent are PCM programs theory-based?
2) To what extent are PCM programs' policies and procedures formalized?

Methods: Sample

- 32 states provide Medicaid-reimbursed PCM
- 30 states shared provider lists
- Constructed frame of programs
  - Eliminated duplicate names and addresses
  - Verified some (but not all) program eligibility
- Invited all presumably eligible programs to participate (N=1029)

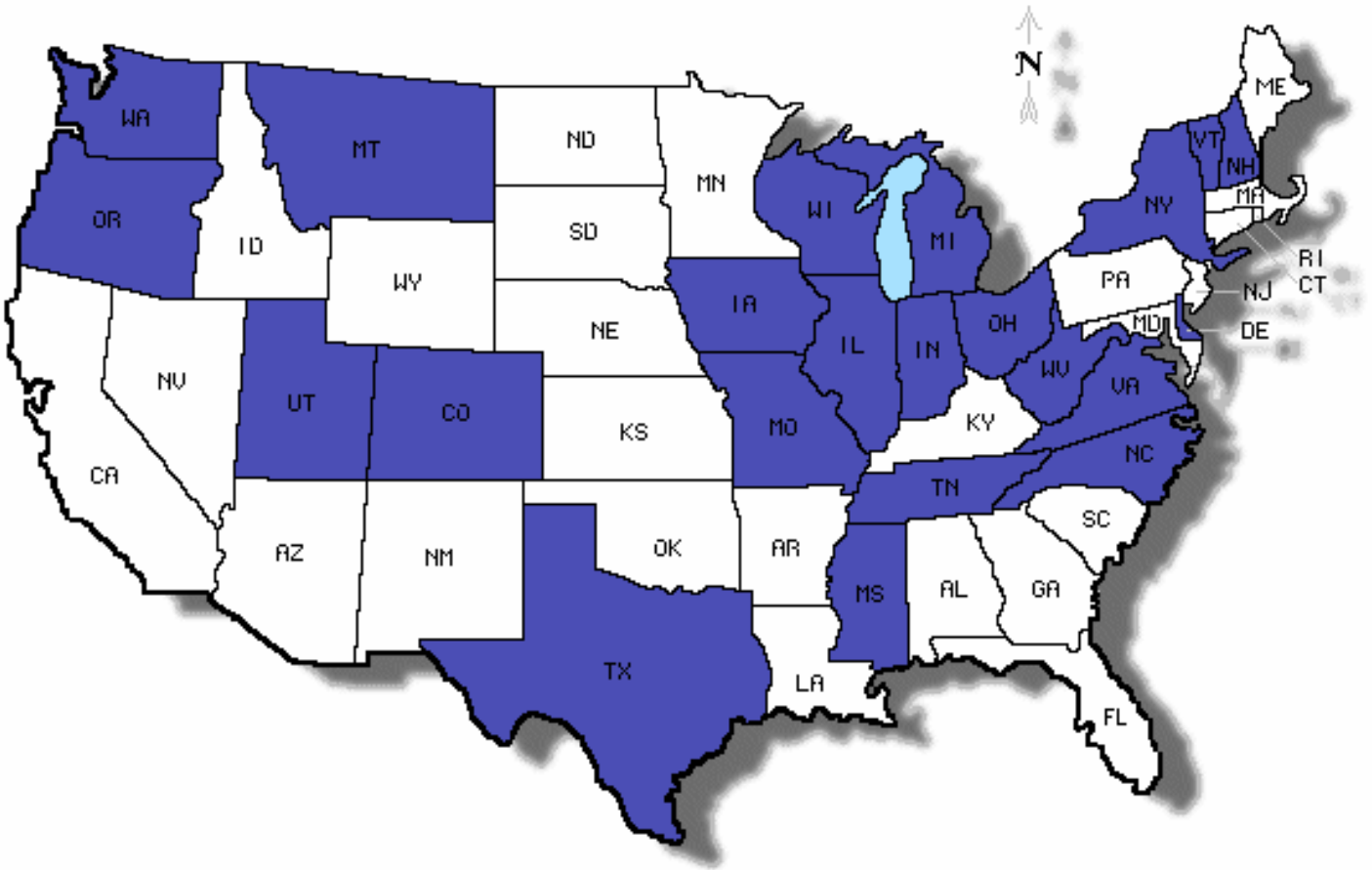
Methods: Questionnaire

- The questionnaire asked about:
  - Characteristics of the program and its home organization
  - Use of evidence
  - Qualifications and background of the program director and staff
- Variables used in the current analysis:
  - Written program policies and procedures
  - Use of EB models or theories as the basis of the program

Methods: Data collection

- SAQ – paper and Internet options
  - Current analyses on mailed Qx only
- Extensive follow-up at regular intervals
  - Telephone, e-mail, fax, and mail reminders, up to 6 contacts
- 35% response rate, after excluding additional ineligible programs identified during follow-up

National distribution of participating programs (n=114)



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Program director characteristics

Personal characteristics

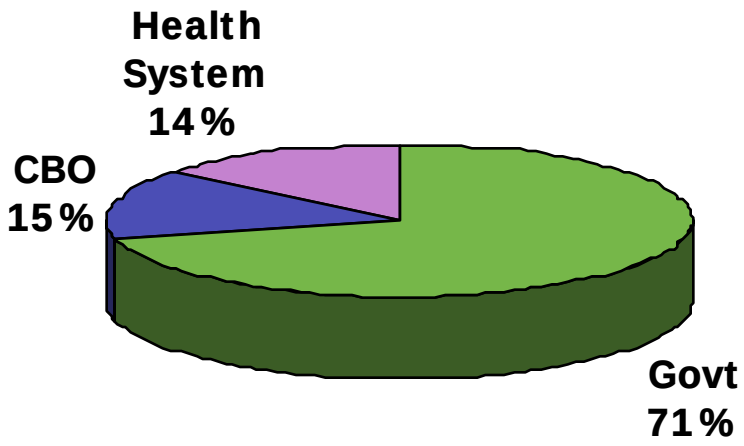
- 98% Female
- Race/ethnicity
  - 87% White
  - 9% African American
  - 3% Hispanic
  - 1% Native American

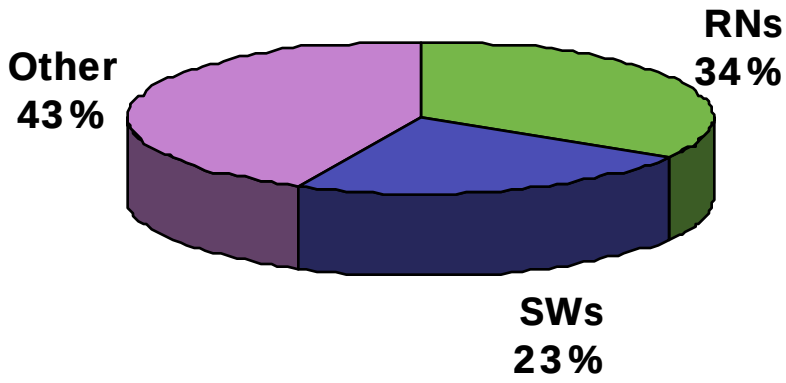
Professional characteristics

- Highest degree
  - 31% Less than Baccalaureate
  - 49% Baccalaureate
  - 20% Master's or higher
- 73% RNs
- 7.8 years in current position

PCM program characteristics

- Age of program
  - Mean: 15.5 years
  - Range: 3 – 27 years
- Mean number of FTEs to be fully staffed: 3.96





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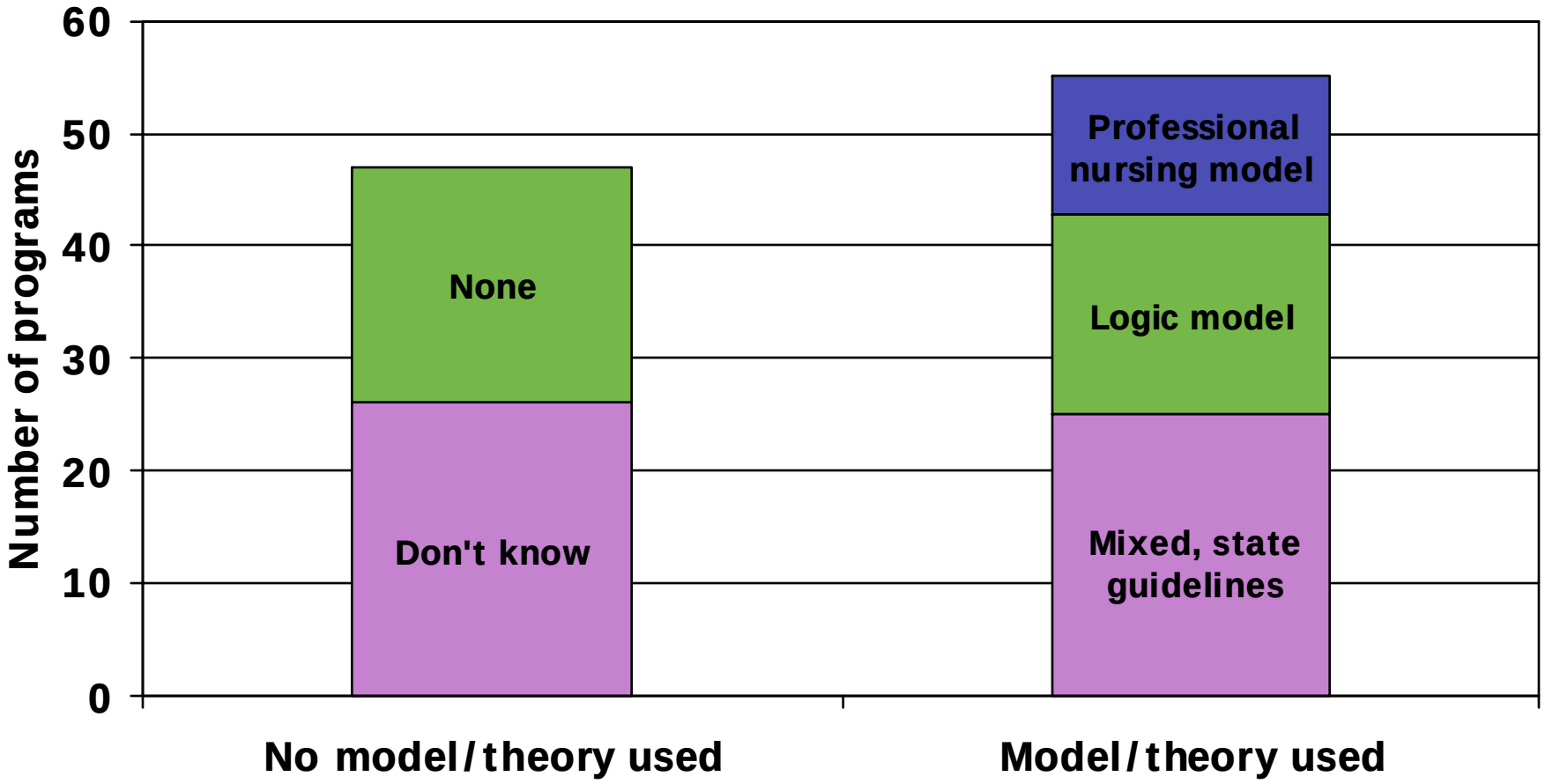
Results: To what extent are PCM programs theory-based?



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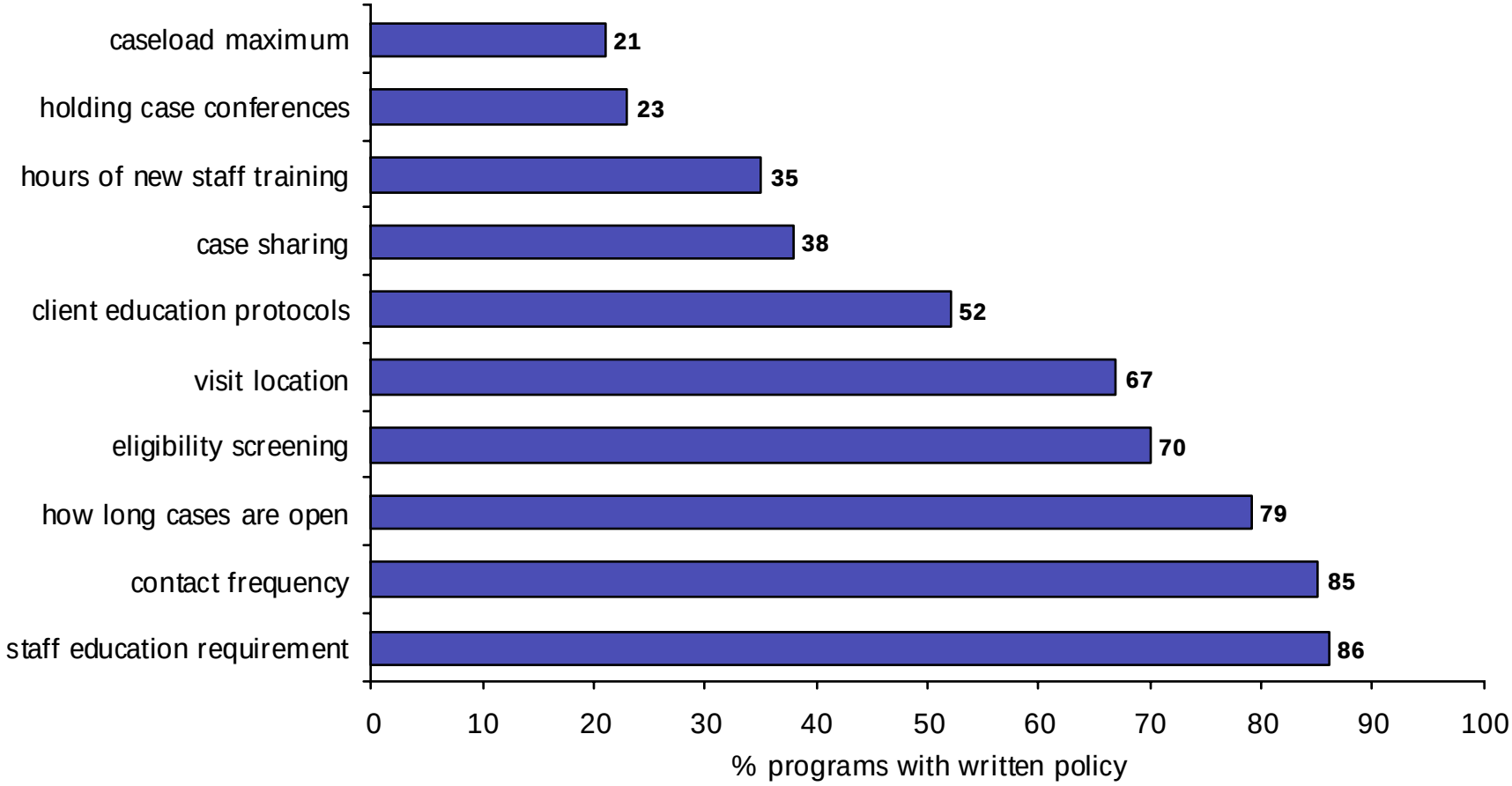
Results: To what extent are PCM programs formalized?

- Formalization
  - Extent to which PCM delivery is guided by written policies and procedures
  - Endorsements across 10 program aspects summed
- Mean formalization score = 5.5 (range=0–10; s.d.=2.4)
- Programs with more FTEs are more formalized (r=.32; p=.003).

Results: To what extent are PCM programs formalized?



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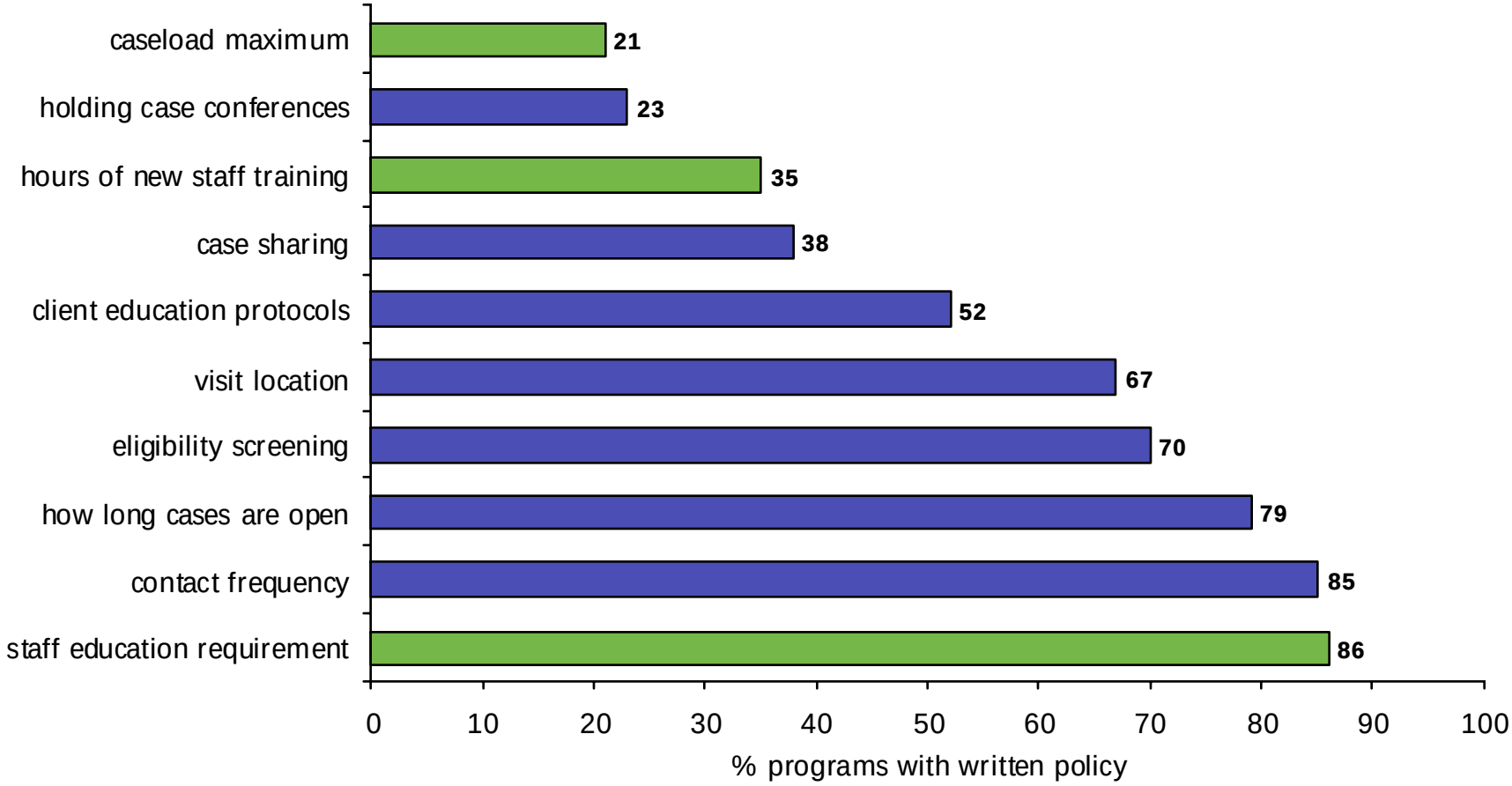
Results: To what extent are PCM programs formalized?



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Results: Is use of a theory associated with formalization?

- Programs using some theory are more formalized than programs not using a theory (6.1 vs. 4.8; p=.01).
- More likely to have written policies for:
  - Eligibility screening (p=.01)
  - Hours of new staff training (p=.02)
  - Client education protocols (p=.02)
  - Holding case conferences (p=.04)

Study limitations

- Not all states offering Medicaid-reimbursed PCM in the study
- Relatively low response rate
- Length of time in the field
- Turnover among program directors and programs
- Impact of state or funding agency requirements on use of theory or program formalization not known

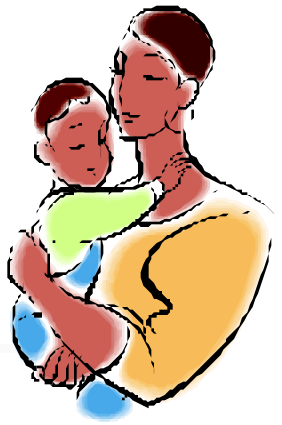
Discussion

- Overall, PCM programs seem to have a low number of written policies and procedures.
  - One would expect a higher degree of formalization within programs serving vulnerable, high-risk populations.
- A consistent theoretical basis is lacking across PCM programs.
  - The large % of PCM programs using their own logic model could be due to the specific needs (e.g., cultural) of the local client population.
  - The large % of mixed theory underlying PCM programs makes it difficult to enforce EBP or specific policies.

Program, practice, and policy implications

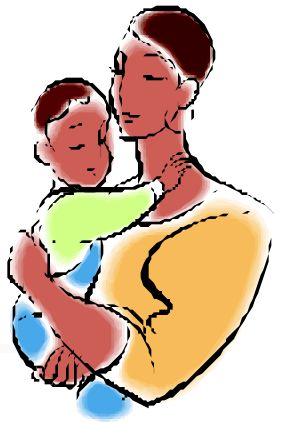
- Failing to use theory or formalized procedures:
  - Creates challenges for evaluating across PCM programs
  - May limit the programs' effectiveness
- Possible need for state or federal policy to promote EB practice.
- Training about different EB models may increase program directors' knowledge and willingness to improve practice.
- Policy targeted toward increasing PCM programs' standardization may improve effectiveness in achieving *HP2010* objectives for birth outcomes.

Future research



- Factors promoting or inhibiting the use of an EB model and/or formalized procedures in PCM programs:
  - State guidelines
  - Funding source
  - Client and catchment area characteristics
- Relationship between program formalization and birth outcomes.

Acknowledgements



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Study Website: http://tigger.uic.edu/~issel/index.htm