Hepatitis C screening in Maryland: A survey of provider practices

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Overall Goals

- Assess knowledge, attitudes, and behaviors regarding HCV among adult primary health care providers in the state of Maryland.
Specific Aims: Primary

- Assess and compare HCV risk-identification practices among physicians and midlevel providers

- **Hypothesis:** Midlevel providers will routinely ask about HCV risk factors more often than physicians
Specific Aims: Secondary

- Compare risk-identification practices by geographic location
- Assess screening practices (HCV-Antibody testing) and compare by provider type and geography
- Assess HCV attitudes and compare by provider type and geography
- Assess HCV knowledge and compare by provider type and geography
- Assess perceived barriers to HCV screening, referral, and treatment
Background

- HCV is the most common blood-borne pathogen in the US
- Leading cause of liver transplantation in the US
- Most chronically infected adults do not know their status
- Direct medical costs to surpass $1 billion/yr within the next 15 years
Screening Controversy

- **USPSTF**: insufficient evidence
- **CDC**: screen in high-risk (IDU, hemodialysis, blood products before 1992, known exposure)
- **NIH**: screen in above *and* incarcerated
- **VA**: screen in above *and* in Vietnam vets, tattoos, body piercings, cocaine or alcohol use.
- **ACPM**: screen in CDC groups *and* sexual partners of IDU.
- **French Consensus**: as the NIH
HCV in Maryland

- Estimated 65,000 (2/3) Maryland residents with chronic HCV do not know it.

- Of reported cases 2001-2004 (MERSS):
  - Majority unclassified
  - 63% male
  - Approx. 7500 of 26,000 reside in Balto. City
  - 31% cases reported IDU as a risk factor
Challenges to characterizing HCV in Maryland

- Lack of access to care for high risk individuals
- No single clear clinical presentation
- Insufficient staff in local health departments
- Inconsistent protocols for collecting and reporting data
- Laboratory resources
Methods

- Survey Development
- Study Design
- Sampling Scheme
- Statistical Plan
Survey Development

- Literature review/published studies (New Haven, national US survey, France)
- Focus groups (NYSDOH and Health Now Foundation)
- Health department surveys (Multnomah County, OR)

Consists of:
- demographics
- knowledge, attitudes, practices
- series of clinical vignettes
Study Design

- Cross-sectional design
- Randomly-selected sample of providers
- Physicians, PA, NP
- Internal medicine, adult medicine, family medicine, geriatrics
- Mailed paper survey to 3000 (of 8059) providers
- Two survey versions, each with 10 vignettes
Sampling Scheme

- Stratify by provider type and sample proportionately

- Of 3000, send to 1890 (63%) physicians, 540 (18%) PAs, 570 (19%) NPs

- Oversampling of rural providers.
**Statistical Plan**

- **Primary outcome variable:** proportion of providers who routinely ask patients about HCV risk factors “most of the time” or “always”

- **Secondary outcome variables:**
  - HCV screening practices (vignettes)
  - HCV knowledge
  - HCV attitudes
  - Perceived barriers

- Power calculated based on 30% response rate and a hypothesized 40% difference for primary outcome
## Power Calculations

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<th>Proportion of physicians asking about HCV risk factors “most of the time” or “always”</th>
<th>Proportion of midlevel providers asking about HCV risk factors “most of the time” or “always”</th>
<th>Effect size</th>
<th>Power</th>
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Data Analysis: primary outcome

- Descriptive statistics
- t-test, ANOVA
- Simple logistic regression
  - Age, degree, number of years since completed training, geographic location, specialty, acceptance of Medicaid and uninsured patients
- Multiple logistic regression
Implications

- Despite controversy, most authorities recommend continued risk-identification and screening in targeted groups.
- Midlevel providers are assuming greater roles in primary care.
- Help target specific providers that need resources.
- Help guide future research to assess the effect of screening on outcomes.
Sponsorship and Funding

- $2000 was awarded as a Capstone Development Award from the Johns Hopkins University Bloomberg School of Public Health to help defray the costs of printing and mailing the surveys.

- The Maryland Department of Health and Mental Hygiene provided large envelopes for survey mailing, and funding for return postage, as well as volunteers to assist with preparing packets for mailing.