Staffing Your TB Program
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Objectives

• Discuss staffing and progress towards patient-centered care

• Describe methods for assessing TB program’s staffing needs for managing TB caseload
Completion of Treatment

• “Treatment adherence is a complex behavioral issue and improving treatment outcomes for TB requires a full understanding of the factors that:
  – prevent people taking medicines correctly
  – help them complete their treatment.”


Public health nurse-reported barriers to TB Case Management/Completion of Treatment – top ten list

- comprehension
- concurrent medical conditions
- denial of TB
- physical problems
- family issues
- side effects of medications
- patient age
- patient transportation
- lack of support network
- isolation noncompliance
Public health nurse-reported barriers to TB Case Management/Completion of Treatment – other

number of cases

- nurse access to patient
- access to physician
- health insurance
- nurse travel to patient
- treatment noncompliance
- poor living conditions
- access to other services
- substance abuse
- language differences
- mental health issues
- legal issues
- homeless
- immigration issues
- drug resistance
- HIV

Methods

- Meta-analysis of 44 studies published between 1969 and 2006 involving approximately 3213 individual TB patients on 5 continents.

- Researches found 8 primary themes associated with adherence to treatment.

8 themes (Munro, et al)

- Organization of treatment and care for TB patients
- Interpretations of illness and wellness
- Financial burden of TB treatment
- Knowledge, attitudes and beliefs about TB treatment
- Law and immigration
- Personal characteristics and adherence behavior
- The influence of side effects on treatment adherence
- Family, community and household influences
Organization of Treatment and Care

• A patient’s relationship with the treatment provider influences adherence.
  – “a large number of studies indicated that poor follow-up by providers or maltreatment by providers (such as scolding a patient for missing appointments) resulted in non-adherence”
  – “other studies noted the positive impact of increased provider-patient contact on adherence” (Munro, et al)

Research I

• “Poor rapport between primary care providers and patients and rigid, task-oriented care delivery are major reasons for non-adherence”
  – Issues and Innovations in Nursing Practice “Changing professional practice in TB care: an educational intervention” Dick J et al
Research II

• “Attitudes of TB staff have been widely cited as a barrier to patients’ repeated attendance of TB centers or formal health services…to interrupt the cycle of low case finding and low case holding there is a real need to listen to patients, their families and communities.”

Research III

• “There is strong evidence that accessibility and acceptability of health services remain the most important factors in patient adherence. Our study demonstrated that previous negative experiences at any clinics were related to non-attendance of those patients referred to clinics.”
How well did the doc communicate with the patient?

<table>
<thead>
<tr>
<th>frequency</th>
<th>percent</th>
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<tbody>
<tr>
<td>1 – very poor</td>
<td>6%</td>
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<tr>
<td>2</td>
<td>14%</td>
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<tr>
<td>3</td>
<td>18%</td>
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<tr>
<td>4</td>
<td>18%</td>
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<tr>
<td>5 – excellent</td>
<td>42%</td>
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<td>Total</td>
<td>71</td>
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Organization of Treatment and Care for TB Patients – Patient Quotes (Munro, et al)

- “The patients do not have adequate means to go to the health center to take their drugs”
- “It just does not make sense as to why a grown up person should be given medicines by someone else. I felt very awkward, and tried to take my medicines myself”
- “A dirty place ….makes people lose heart and feel unenthusiastic about continuing treatment”
- “I was afraid to go to the doctor, I thought that he would scold me because I missed my treatment”
- “The minute you tell them you’re homeless they treat you real snobbish..”
Factors likely to improve TB treatment adherence (Munro, et al)

- “Minimize costs and unpleasantness related to clinic visits and increase flexibility and patient autonomy
- Increase flexibility - patient choice of treatment plan and type of support
  - Options that maintain patient autonomy…appear to run contrary to the organization of many TB services
- Increase the patient centeredness of interactions between providers and clients
- Address structural and personal factors (e.g. incentives and enablers)"

Incomplete treatment results in drug resistance, prolonged therapy and further transmission

Costs of relapsed cases range from
- $10,000 to $18,000 for pan sensitive cases
- $46,000 to $500,000 for drug resistant cases
Universal DOT – debate?

- Many programs have DOT as the standard of care for all patients
- MA TB Program - case management standard of care for all patients
  - Provide patient-centered care with selective DOT based on an assessment of individual attributes, rather than universal DOT.
  - Evidenced-based finding - no difference in outcome between SAT/DOT for most patients.
    - Janice Boutotte, Ph.D, RN “Translating Research into Practice: Effectiveness of Nursing Case Management in Ensuring Completion of Treatment for TB Treatment” NTCA June 2006

Workforce challenges....

<table>
<thead>
<tr>
<th>Workforce Challenges in Public Health</th>
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<tbody>
<tr>
<td>158 The number of public health workers per 100,000 population in 2000, down from 219 in 1980</td>
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<tr>
<td>25 Percentage of the professional public health workforce composed of nurses</td>
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<td>49.5 The average age of public health nurses</td>
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<tr>
<td>59 Percentage of local health departments anticipating difficulty hiring public health nurses</td>
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<tr>
<td>19 Estimated mean percentage of the local health department workforce eligible for retirement by 2010</td>
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</tbody>
</table>

Source: The Public Health Workforce Enormation 2006, Center for Health Policy, Columbia University School of Nursing, HRSA-ATSDR Cooperative Agreement # U48-M0045. National Association of County and City Health Officials, 2006 National Profile of Local Health Departments Scale and The Local Health Department Workforce: Findings from the 2005 National Profile of Local Health Departments Scale.
TB STAFFING STANDARDS

• WAY OF DETERMINING THE NUMBER OF STAFF REQUIRED TO DO THE WORK OF A TB CONTROL PROGRAM

• QUANTITATIVE STATEMENT DERIVED BY:
  – Determining hours of nursing staff time available in the coming month to do the work
  – Scope of work to be done throughout the coming month which includes utilization of an acuity system which identifies patients’ needs

High Acuity Patients

– Substance abuse
– Homelessness
– Contacts not adherent
– Not adherent case
– Non-acceptance of TB
– Medical mismanagement/provider issues
– Treatment with IV medication and no home health
Exercise:

PATIENT ACUITY ASSESSMENT

FACTORS IN DETERMINING WORKLOAD

- Amount of available work hours per month
- Scheduled time off per month
- The number of planned visits per month based on acuity
- Collaboration time per month (Providers, other members of multi-disciplinary team)
- Non-household worksite or institutional investigations
- Other time
Results - KC

• Kansas City
  – Median 410 deficit hours or shortage 2 FTE
  – Issues
    • Epidemiology specialists devoting hours to TB – actually paid out of bioterrorism $$$
    • Nursing shortage
  – Results
    • Added staff – prophy RN
    • New refugee nurse
    • Cooperative agreement – adding one FTE nurse (.5 funded through cooperative agreement)

References

• Edginton et al, “Tuberculosis at Chris Hani Baragwanath Hospital: numbers of patients diagnosed and outcomes of referrals to district clinics” Int J Tuberc Lung Dis 9(4):398-402
• Janice Boutotte, Ph.D, RN “Translating Research into Practice: Effectiveness of Nursing Case Management in Ensuring Completion of Treatment for TB Treatment” NTCA June 2006