

Accelerating the rate of improvement of glucose screening in Northern New England

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The Northern New England Cystic Fibrosis Consortium



The NNECFC is a regional, voluntary consortium of more than 80 clinicians and researchers from the CF care centers in Maine, New Hampshire and Vermont.

The mission of the group is to improve CF care and patient outcomes.

Background

- In 1999 the US CFF published guidelines recommending early screening for CFRD.
- CFRD is associated with higher rates of nutritional failure, accelerated pulmonary decline, and earlier death. Early screening and treatment is critical.

Goal

- The purpose of these analyses was to evaluate the rate of improvement in CFRD screening between 1998 and 2002 in centers participating in a regional improvement collaborative in Northern New England (NNECFC) and compare those rates to the average national improvement rate during the same time.

Data

- Dataset included 12,150 non-diabetic patients >13 years in the CFF Patient Registry for 1998 and 2002.
- Random blood glucose, fasting blood glucose, or oral glucose tolerance test were combined as “yes” for screened.

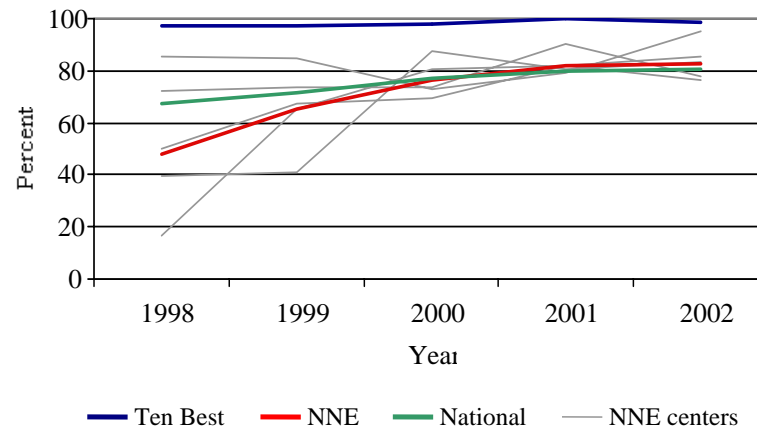
Methods

- Each center received an annual feedback report of their CFRD screening rate from the CFF Annual Patient Registry.
- We compared the national average screening rates for the years 1998 and 2002 to the rates for the five CF-care centers participating in the NNECFC.

Glucose Screening in Non-Diabetic CF Patients >13 Years

| Center | 1998 (%) | 2002 (%) | Change |
|----------|----------|----------|--------|
| 1 | 85.2 | 95.2 | 10.0 |
| 2 | 50.0 | 85.2 | 35.2 |
| 3 | 17.0 | 76.2 | 59.2 |
| 4 | 39.4 | 83.3 | 43.9 |
| 5 | 72.4 | 77.8 | 5.4 |
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| NNE | 47.6 | 82.6 | 35.0 |
| National | 13.3 | 67.2 | 53.9 |
| Ten Best | 96.9 | 98.3 | 1.4 |

Glucose Screening, NNE and National



Improvement Interventions

- Improvement interventions included: data feedback to clinicians, better patient education on the importance of screening, clinic system changes to trigger annual blood work, systems to track annual blood work, and better transmission of data from in-patient units to outpatient clinic providers.

Results

- The national average screening rate improved from 67.2% to 80.5% between 1998 and 2002.
- Among the five NNECFC centers in aggregate, the CFRD-screening rate in this time period improved from 47.6% to 82.6%, more than twice the national rate.
- It is important to note that six US centers achieved a 100% CFRD screening rate in 2002.

Conclusion

- Improvement in screening rates may be a reflection of both better data tracking and more screening driven by increased clinician and patient awareness.
- Giving data feedback provides a strong incentive to improve and can result in accelerated improvement so centers can identify and correct internal system problems.