BreastScreen Singapore: Lessons Learnt

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Outline

• Singapore: An Introduction
• Singapore’s Healthcare System
• Burden of Disease
• Screen for Life: BreastScreen Singapore
  ➢ Background
  ➢ Publicity & Awareness
  ➢ Quality Assurance (QA)
  ➢ Performance
SINGAPORE: AN INTRODUCTION

Image source: www.mustsharenews.com
SINGAPORE’S HEALTHCARE SYSTEM
Singapore’s Healthcare System

Funding

- Affordability Health Care
  - Up to 80% at public healthcare institutions
- Personal Savings
  - To pay for smaller healthcare bills
- Basic Health Insurance
  - To help with larger hospital & healthcare bills
- Safety Net
  - To provide help to needy Singaporeans

Services & facilities

- Regional Health Systems
  - Primary healthcare facilities
    - Private GP clinics
    - Government polyclinics
  - Hospitals
    - Public hospitals (6 + 2)
    - Private hospitals
  - Dental Services
  - Intermediate & Longterm Care Services (Residential, Community)
  - Traditional Chinese Medicine practices

Ministry of Health

Health Promotion Board

Source: www.moh.gov.sg
BURDEN OF DISEASE

Image source: www.globalsurgery.org
Singapore’s Burden of Disease
Distribution of Disability-Adjusted Life Years (DALYs) by Broad Cause Group

Data Source: Singapore Burden of Disease Study, 2010, Ministry of Health
Singapore’s Burden of Disease: Cancers

Ten Most Frequent Cancers (%) in Females, 2010-2014

HEALTH PROMOTION BOARD’S
SCREEN FOR LIFE
# National Screening Programmes

Guided by the recommendations of the Screening Test Review Committee (STRC)

## PROGRAMMES

<table>
<thead>
<tr>
<th>Programme</th>
<th>What &amp; Who</th>
<th>Where</th>
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<tbody>
<tr>
<td>BreastScreen Singapore (BSS)</td>
<td>A national programme which provides subsidised mammogram services to women 40 &amp; above</td>
<td>15 Polyclinics + 1 Pvt. Clinic @ HPB + 1 VWO + 1 Mammobus</td>
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<tr>
<td>CervicalScreen Singapore (CSS)</td>
<td>A national programme which provides subsidised Pap smear services to women 25 &amp; above</td>
<td>18 Polyclinics</td>
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<tr>
<td>National Colorectal Cancer Screening Programme (NCRCPP)</td>
<td>A national programme which provides subsidised FIT testing services to adults 50 &amp; above</td>
<td>GP clinics (~350)</td>
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<tr>
<td>Screen for Life @ GP Clinics (SFL)</td>
<td>A national programme which provides subsidised chronic disease &amp; cancer* screening services to adults 40 &amp; above</td>
<td>GP clinics (~350)</td>
</tr>
<tr>
<td>Community Functional Screening Programme (CFSP)</td>
<td>A pilot programme which provides subsidised functional screening services to older adults 60 &amp; above</td>
<td>Community (CCs, RCs, VWOs)</td>
</tr>
</tbody>
</table>
BreastScreen Singapore Singapore (BSS): Background

Accessibility of Screening Services

Legend
- 17 Screening Centres at Polyclinics, HPB and 1 VWO
- 1 Reading Centre
- 4 Reading & Assessment Centres
- NHGD’s Mammobus
BSS Quality Assurance

• Established a QA Framework with guidelines and standards for BSS and Medisave-approved centres

• Introduced double reads of mammograms; (+ 3rd reader for discordant cases)

• Adopted a multi-disciplinary approach towards breast cancer management with a pool of dedicated clinicians ensuring continuum of care for patients

• Biennial on-site audits carried out to screening, reading and assessment centres to monitor centre performance on clinical indicators:
  ➢ Cancer detection rate (invasive cancers)
  ➢ In-situ cancer detection rate
  ➢ Benign operative biopsy rate in assessed women
  ➢ Recall rate

• Quality improvement measures (e.g. internal QC checks, regular clinical reviews) in place for centres with deficiencies

• On going capacity building for medical and allied healthcare professionals (e.g. BreastScreen Singapore biennial seminar)
QA documents for BSS Screening, Reading & Assessment Centres

Certificates awarded to BSS centres who meet the standards
### Comparison with Other Countries

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<tbody>
<tr>
<td><strong>Detection Rate</strong></td>
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<tr>
<td>First Screen</td>
<td>5.87 (5.86-5.89)</td>
<td>7.92 (7.88-7.96)</td>
<td>3.0 (6.5-7.9)</td>
<td></td>
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<tr>
<td>Rescreen</td>
<td>4.27 (4.24-4.29)</td>
<td>4.33 (4.31-4.35)</td>
<td>2.3</td>
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<tr>
<td><strong>Small Tumour Detection Rate</strong></td>
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<tr>
<td>First Screen</td>
<td>2.32 (2.30-2.33)</td>
<td>4.04 (4.01-4.07)</td>
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<td></td>
<td>2.8</td>
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<tr>
<td>Rescreen</td>
<td>2.68 (2.66-2.69)</td>
<td>2.50 (2.49-2.51)</td>
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<td><strong>Recall Rate</strong></td>
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<tr>
<td>First Screen</td>
<td>10.28 (10.26-10.30)</td>
<td>17.68 (17.62-17.74)</td>
<td>3.0 (9.3-9.7)</td>
<td></td>
<td>8.5</td>
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<tr>
<td>Rescreen</td>
<td>5.17 (5.15-5.20)</td>
<td>5.62 (5.60-5.65)</td>
<td>2.0 (4.0-4.1)</td>
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<td><strong>Sensitivity</strong></td>
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<tr>
<td>First Screen</td>
<td>79.20 (75.64, 82.76)</td>
<td>80.00 (73.99, 86.01)</td>
<td>76.4</td>
<td>91.8</td>
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<tr>
<td>Rescreen</td>
<td>70.69 (63.94, 77.46)</td>
<td>74.90 (74.50, 75.30)</td>
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<td>86.8</td>
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<td><strong>Specificity</strong></td>
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<td>First Screen</td>
<td>90.22 (89.98, 90.42)</td>
<td>82.89 (82.36, 83.44)</td>
<td>96.4</td>
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<tr>
<td>Rescreen</td>
<td>95.86 (95.67, 96.13)</td>
<td>95.21 (95.00, 95.40)</td>
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<td><strong>Interval Cancer</strong></td>
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<tr>
<td>First Screen</td>
<td>6.15 (6.13-6.17)</td>
<td>6.38 (6.34-6.42)</td>
<td>6.3 (5.1-7.8)</td>
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<tr>
<td>Rescreen</td>
<td>4.41 (3.39-4.41)</td>
<td>2.27 (2.26-2.28)</td>
<td>6.5</td>
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*The sensitivity and specificity of screening in Norway presented are for first screens and rescreens collectively.

**The sensitivity and interval cancer rates in Australia presented are for the period 2003-2005.

Thank You
For More Information..

www.screenforlife.sg

screenforlife@hpbgov.sg