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UICC PRESIDENT'S PORTFOLIO
GLOBAL TASK FORCE ON RADIOTHERAPY FOR
CANCER CONTROL

Toronto Launch Meeting

Joint Meeting of International Secretariat and Working Group Leads

February 6th, 2014 0800-1530

Toronto Sheraton Centre

Present: M. Milosevic, T. Hanna, D. Rodin, M. Barton, Mei Ling Yap, J. Torode, S. Tyldesley, F. Knaul, M. Gospodarowicz, D. Collingridge, R. Atun, Y. Lievens, B. O'Sullivan, D. Jaffray, J. van Dyk, M. MacPherson, M. Baumann

MORNING SESSION

1. Review of structure and membership (D. Jaffray).
 - a. Working group leads can request new members as required.
 - b. Recognition that education is important and transcends all domains. Need to identify an education leader.
 - c. Enabling services must be described and acknowledged (MG). Strengthening the regulatory environment strengthens to whole health care system and could help the economic argument. Need to craft the investment strategy to include synergies with enablers as part of a broader health care system.
2. The Global Task Force on Expanded Access to Cancer Care and Control (F. Knaul)
 - a. Diagonal strategies: Positive externalities can arise from the investment. An example would be creation of regulatory framework or quality system monitoring. The quality piece is strongly linked and could be a helpful diagonal strategy. E.g., we can measure "effective coverage".
 - b. Harness catalytic ideas--grand convergence, NCDs as priority challenges.
3. Towards an Investment Framework for Radiotherapy for Cancer (R. Atun)
 - a. Lancet commission on global health (global health 2035) a world converging within a generation. Mentions basic packages that evolve into expanded



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- packages (including cancer). There is a case for an expanded cancer package. Discussion on how RT fits into that package.
- b. Requirements for investment framework.
 - i. Burden trends over 20 years and projections (IARC). Suggest target date of 2035 to align with Lancet Global Health – also allows time to act on recommendations
 - ii. Cost effective interventions. Cost of core interventions and enablers.
 - iii. Effects of core interventions.
 - iv. Health systems readiness and feasibility. Mapping of existing capabilities infrastructure, HR, cancer plans. Need to articulate that investment in facilities and HR must take place in tandem.
 - c. Cost and benefit of investment – benefits of mortality, lives saved, economic benefits, cost of inaction.
 - d. Critical success factors.
 - i. Committed leadership at all levels.
 - ii. Normative and technical legitimacy – convincing stakeholders of the benefits nature magnitude and time horizon
 - iii. Transformative action – mechanism, instruments, accountability.
4. Working Groups 1(Burden of Disease) and 5 (Expected Outcomes) M. Barton
- a. Reviewed model used for radiotherapy indications Tree design based on type, stage, performance, relapse.
 - b. Approach used by ESTRO QUARTS, IAEA, Australian government. 35 publications based on this work.
 - c. Revised in 2012 including synchronous chemotherapy, brachytherapy, patient preference. Old radiotherapy utilization rate (RTU) 52.3%. Revised RTU 48.3%.
 - d. Sensitivity analysis 150 variables. Multivariate used MC simulation.
 - e. Adopting to other jurisdictions – use cancer data from Globocan for all countries.
 - f. Stage affects radiotherapy utilization – perhaps use economic stratification to model.
 - g. Suggest model survival benefit for most common cancers.
 - h. Can project to 2035, but impacts of prevention, education, practice change need to be modeled.
 - i. Costs will be modeled from decision to treat to end of radiotherapy.

Takeaway: Need to come up with rationale for which cancers to include on the list and align with advocacy discussion. Burden and outcomes group to come back with a recommendation around those factors.



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5. Working Group 2 (Core Investments). J. van Dyk:

- a. Review of IAEA Radiotherapy Cost Estimator (Yolande Lievens)
 - i. Activity based costing using cost drivers. Personnel costs, estimates for cost per square meter for facilities, capital costs of equipment, maintenance costs...
 - ii. Includes protocols for RT different fractionation schemes, FTE overhead and clinical time.
- b. General comment more than needed for this effort but we can capture what we need.
- c. General Requirements for Cost Calculation
 1. Upfront Costs /Amortization
 2. Episode of Care (Decision to Treat to End of Radiotherapy)
 3. Scalability (linearity, lag)
 4. Economic Stratification (LI, LMI, HMI, HI)
- d. Unit of calculation is the episode. Need estimate of cost to treat each episode or group of episodes.

Recommended:

Get average number of fractions per course in low/middle/high income stratifications to reflect case mix.

Generate an average cost per course.

Use the model to run 3 or four representative scenarios to come up with a “unit of intervention”.

Generate time dependence of costs

Generate education components of costs

Do projections to 2035 and test for scalability.

AFTERNOON SESSION: REVIEW OF DISCUSSION AND RECOMMENDATIONS

MANDATE

1. Mandate is to report on costing activity in December 2014.



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2. Need to explore diagonality elements (e.g. quality metrics) that support the broader health care system.
3. Suggest projection date of 2035 to align with Lancet Global Health. Concerns were raised regarding the reliability of the model on that time frame. Suggest interim targets, acknowledge less reliable beyond 2025. Agree to recommend 2035, provided that uncertainties are acknowledged.

TIMELINES

April 4th, 2014. ESTRO, Vienna. Proposed content:

1. Present draft computational model based on one or two income-based scenarios. For proof of principle.
2. Inventory of data sources and assumptions should be defined by then.
3. Gantt Chart of Task Force Activities including communication to stakeholders.
4. After Vienna circulate protocol and assumptions to task force members for comment and confirmation of support.

June 2nd, 2014. ASCO Consultation Meeting to explore assumptions/perceptions around enabling services in the broader oncology community. Mike Milosevic will lead consultation meeting

September 2014. ASTRO Working Meeting Report on GTFRCC Model Development, draft results circulated to task force.

WORKING GROUPS

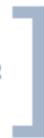
Working Group 1 (Burden of Cancer Requiring RT) and Working Group 5 (Outcomes)

1. Model as presented is supported
2. Approximation of GNI-based distribution of staging is endorsed
3. Time dependent capabilities. The model should be re-run at 5 year intervals to reflect evolving global landscape.
4. Principle output will be courses of radiotherapy. Fraction scenarios based on staging mix will be run to provide cost estimates in different jurisdictions.
5. Calculations will be based on approximately 7 representative cancers, selected according to:
 - a. Rates of Incidence
 - b. Proportion of Burden
 - c. Demand for radiation



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- d. Alignment with advocacy
6. Data sources: Globocan, IARC data for GNI breakout of stage data. Possible use GBD (for triangulation on totals/incidence –supported with reservations).

Working Group 2 (Core Investments)

1. Discussion around complexity of cost estimates. General agreement that we do not need activity based costing as used in the IAEA RT cost calculator, but the broad categories are the same.
Recommendations:

- a. Develop an approach that is fundamentally the same as IAEA approach, but adapted to the needed detail
- b. Review for validity
- c. Update equipment costs
- d. Use detailed model to generate bulk cost factors
 - i. Include GNI dependence to align with demand calculation.
 - ii. Include technological variation
 - iii. Time-dependent calculation
 - iv. Examine linearity/scalability
 - v. Human Resources
- e. Education/HR
 - i. Staffing Standards
 1. No GNI adjusted staffing (UIC, ULMIC, LLMIC, LIC)
 - ii. Investment and capacity building model (existing models?)
 - iii. Labour market adjustments
 - iv. Automation
 - v. Reach out to Commission on Health Professionals for a New Century.

2. Suggest re-cast GTFRCC functional diagram with nesting of core, critical, contextual enablers to more clearly present dependencies.

Action: WG2 call in next two weeks to discuss costing activity.

DATA SOURCES

1. Working groups 1,5
 - Source:
 - GloboCan for country-by-country calculation.



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- Gain access to IARC Raw Data (C. Wild) for GNI break-out of the stage data
- Triangulate:
 - Global Burden of Disease (validation on totals/e.g. incidence) Projections
- 2. Working group 2
 - Source:
 - DIRAC – current state
 - Staffing Levels – current state
 - (HERO – half of European countries)
 - Triangulation:
 - Industry databases
 - WHO Technology Database
 - Market Analysis Reports
 - Regional costs corrections (PQR – Price and Quoting)
 - Manpower (CHOICE Database)
 - Equipment
 - Education
 - Education – training program
 - Lancet Commission on Health Professionals for a New Century.