

# Hospital planning : Overview and lessons learnt from Sengkang

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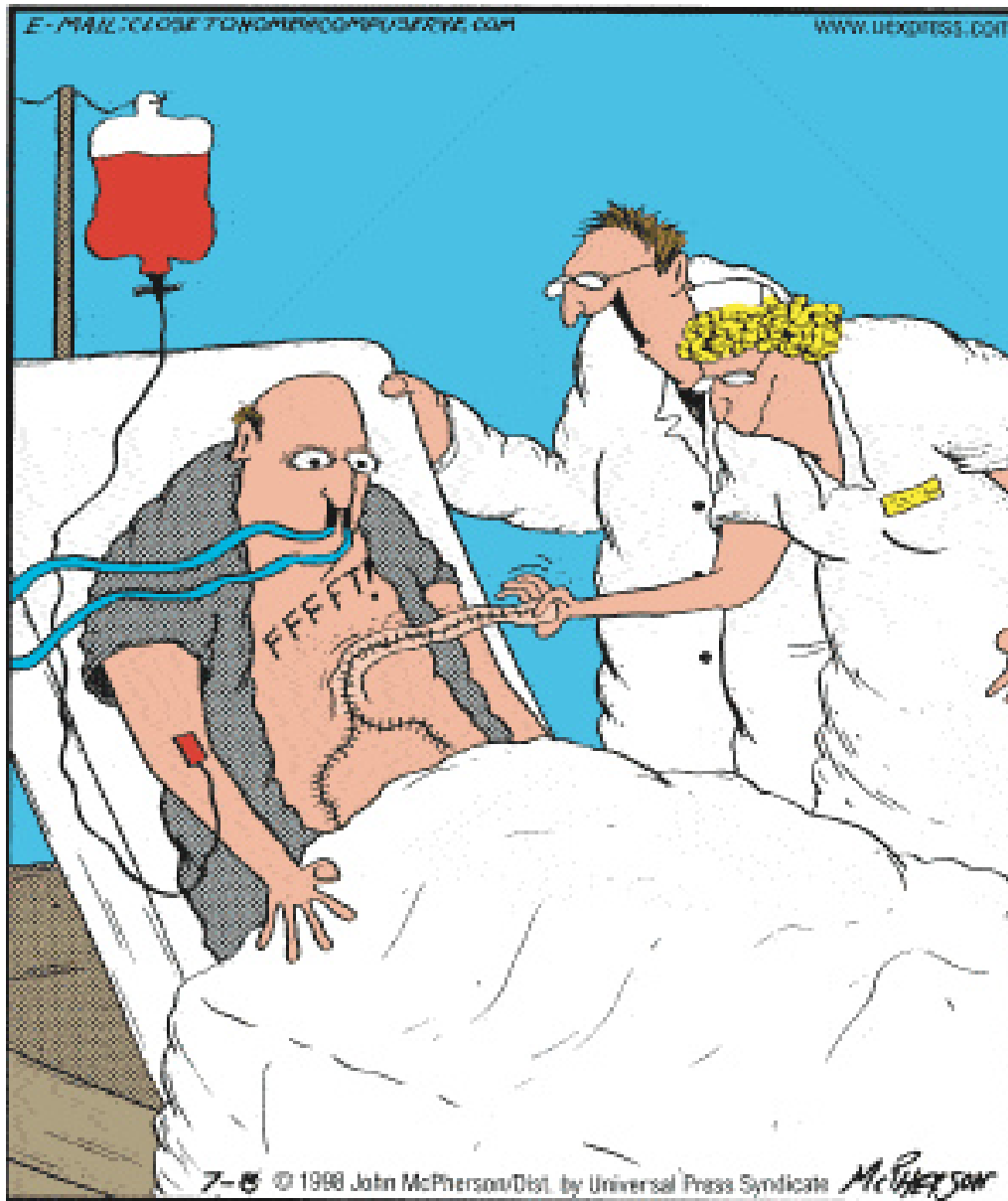
# Overview

- 1) Hospital planning : Overview and lessons learnt from Sengkang  
Prof Chris Cheng ([Christopher.cheng.w.s@sgh.com.sg](mailto:Christopher.cheng.w.s@sgh.com.sg))
- 2) 'Getting it right – the voice of the users'  
Ms Grace Chiang ([grace\\_chiang@nhgp.com.sg](mailto:grace_chiang@nhgp.com.sg))
- 3) Infection Prevention in Hospitals : Designing Away the Risk  
Dr Brenda Ang ([Brenda.ang@ttsh.com.sg](mailto:Brenda.ang@ttsh.com.sg))
- 4) From Master-planning to Total Experience Design  
Mr Jude Wessels, Designer/Planner, Kahler Slater  
Mr David Groth, Architect/Associate Principal, [Kahler Slater](#)





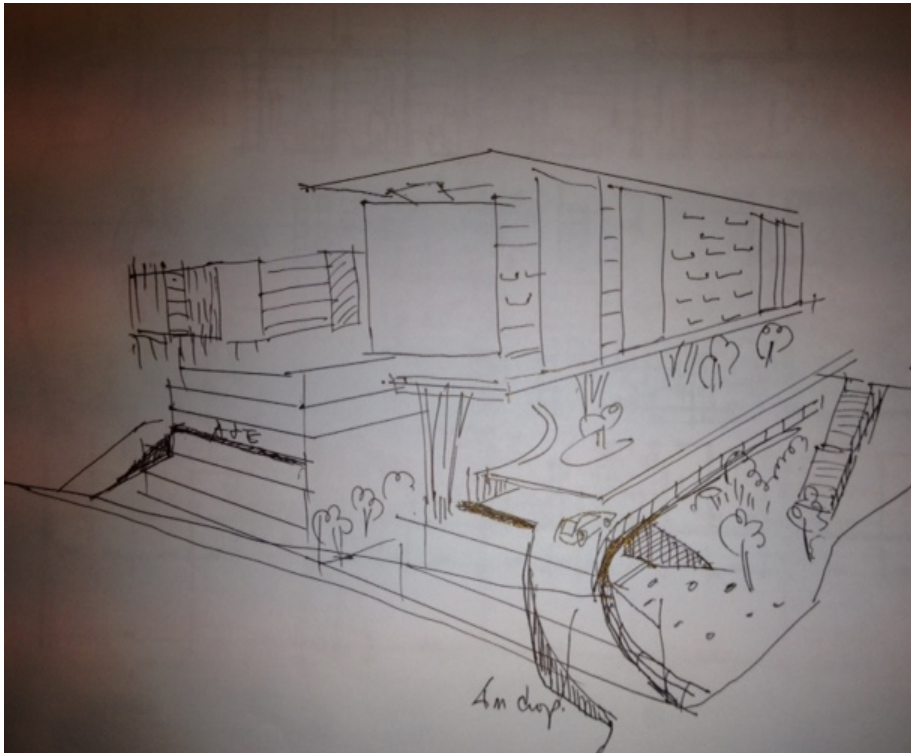
*"We'll just mill around till he's asleep, and and then send him back up. This operation is actually for a placebo effect."*



**"Now that you're fully recovered, Mr. Dawkins, we can tell you the truth. The 12-hour operation, the intravenous meals, the three weeks of bed rest ... all were part of an elaborate placebo effect."**



# Sengkang Hospital



## 2 – North-East Elevation Junction of Anchorvale Street and Sengkang East Road

WORK IN PROGRESS



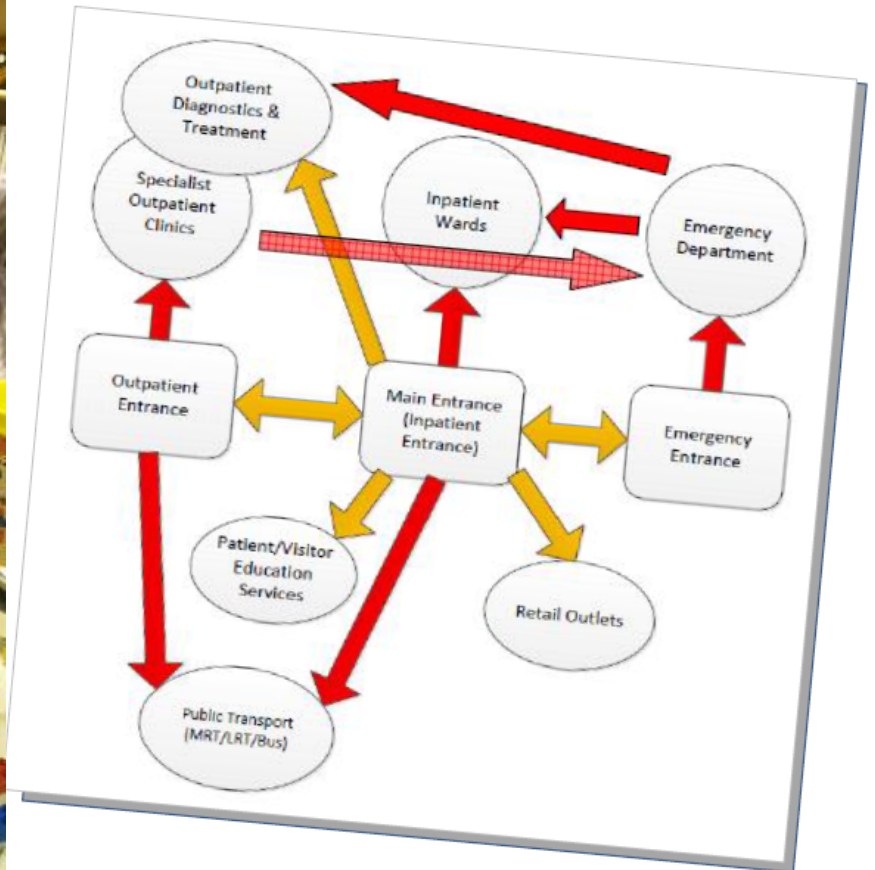
Sengkang General + Community Hospital



DP ARCHITECTS PTE LTD

AECOM





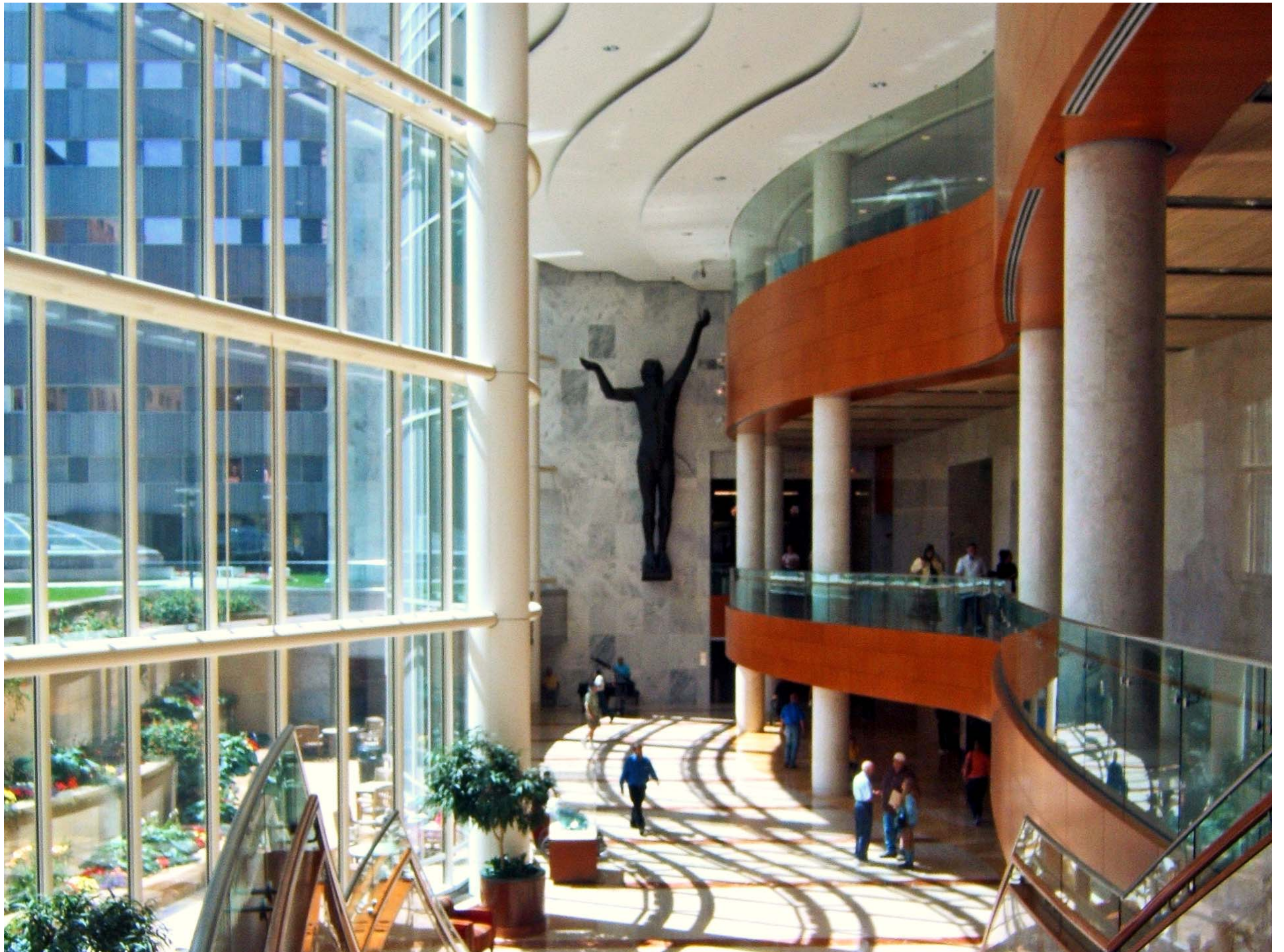
# **Science: Safe & Efficient Design**

- Patient outcomes
- Patient satisfaction
- Clinical quality & safety
- Staff satisfaction
- Operational efficiency
- Financial performance

# Clues to Quality: placebo effect

- Facilities Planning & Design
  - Beyond evidence based design for safety and efficiency
  - Environment and processes where trusting relationship blossoms
  - Providers at their best, patients peace of mind
- Physical environment has behavioral effects
  - Air quality, ventilation, temperature
  - Color, texture, reflectance, materials
  - Light, quality, amount, access to nature
  - Space, layout, privacy, way finding
  - Noise, vibration, aroma
  - Security and safety
  - Friction, traction









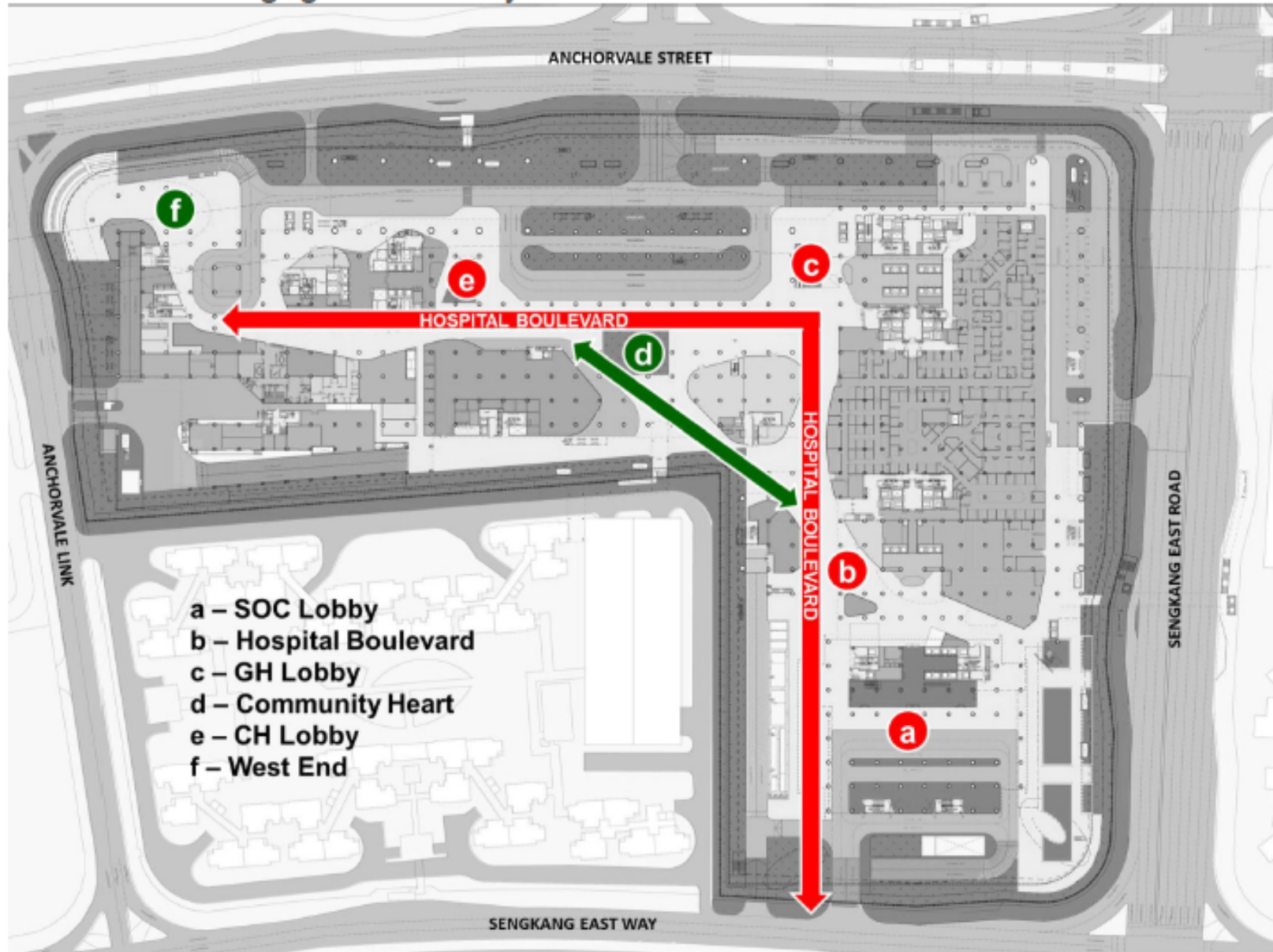
# Embedded within fabric of community

Porous first floor to engage community



# Embedded within fabric of community

Porous first floor to engage community





# Evidenced-based

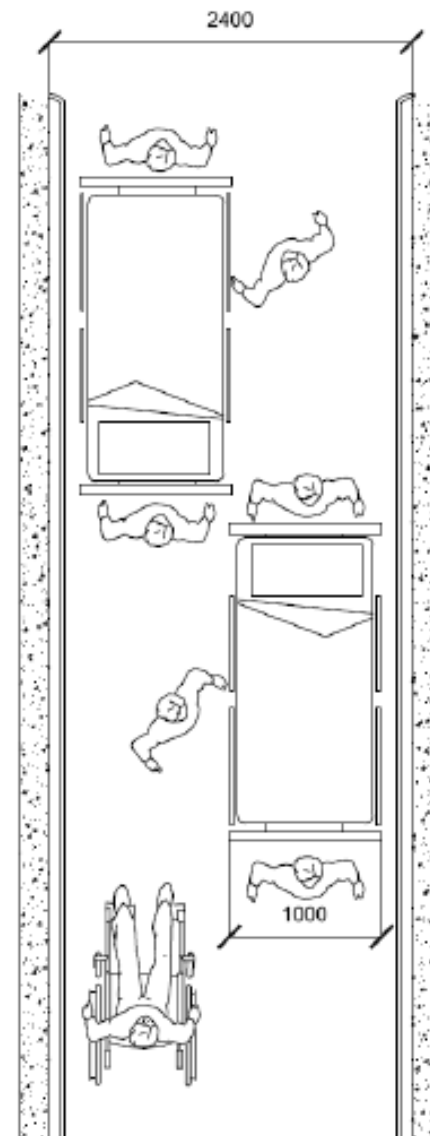
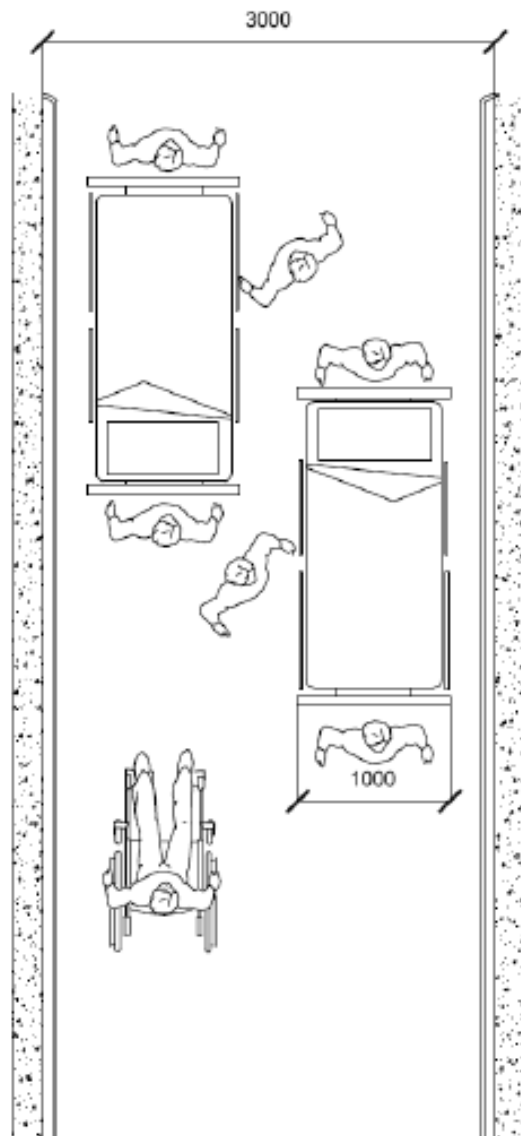
Wider corridor to mobilise elderly patients during inpatient stay





# Evidenced-based

Wider corridor to mobilise elderly patients during inpatient stay



This is a detailed architectural floor plan of a hospital ward, showing various rooms, corridors, and specialized areas. The plan includes room names, abbreviations, and areas in square meters.

**Key Areas and Rooms:**

- Recovery Stages:** Recovery Stage 1 (191 m²), Recovery Stage 2 (110 m²), Recovery Stage 2 (221 m²).
- Operating Theatres (OTs):** OT 1 (57 m²), OT 2 (55 m²), OT 3 (70 m²), OT 5 (57 m²), OT 6 (55 m²), OT 7 (55 m²), OT 17 (90 m²).
- Specialized Rooms:** Robotics OT (63 m²), Ortho OT (63 m²), ST STERILE (22 m²), STERILE (47 m²), STERILE (51 m²).
- Support Rooms:** Staff (12 m²), CU (7 m²), WC (3 m²), MEDS (6 m²), ISO (12 m²), TRLY (2 m²), BAY EQ (11 m²), IND (12 m²), EXIT LOBBY (14 m²), SCRUB (4 m²), WKST (6 m²), OFFICE (5 m²), CORV (5 m²), AV CART (15 m²), SERVICE ROOM (03.CM.3117 MV), WIRE CENTRE (03.CM.3121), SPS (03.CM.3121), STOP LOBBY (03.CM.3121), S.09B, ORTHO STORE (30 m²), CONSIGN EQ STORE (30 m²), S.19, S.20A, S.20B, S.20C, S.20D, S.20E, S.20F, S.20G, S.20H, S.20I, S.20J, S.20K, S.20L, S.20M, S.20N, S.20O, S.20P, S.20Q, S.20R, S.20S, S.20T, S.20U, S.20V, S.20W, S.20X, S.20Y, S.20Z, S.20AA, S.20AB, S.20AC, S.20AD, S.20AE, S.20AF, S.20AG, S.20AH, S.20AI, S.20AJ, S.20AK, S.20AL, S.20AM, S.20AN, S.20AO, S.20AP, S.20AQ, S.20AR, S.20AS, S.20AT, S.20AU, S.20AV, S.20AW, S.20AX, S.20AY, S.20AZ, S.20BA, S.20BB, S.20BC, S.20BD, S.20BE, S.20BF, S.20BG, S.20BH, S.20BI, S.20BJ, S.20BK, S.20BL, S.20BM, S.20BN, S.20BO, S.20BP, S.20BQ, S.20BR, S.20BS, S.20BT, S.20BU, S.20BV, S.20BW, S.20BX, S.20BY, S.20BZ, S.20CA, S.20CB, S.20CC, S.20CD, S.20CE, S.20CF, S.20CG, S.20CH, S.20CI, S.20CJ, S.20CK, S.20CL, S.20CM, S.20CN, S.20CO, S.20CP, S.20CQ, S.20CR, S.20CS, S.20CT, S.20CU, S.20CV, S.20CW, S.20CX, S.20CY, S.20CZ, S.20DA, S.20DB, S.20DC, S.20DD, S.20DE, S.20DF, S.20DG, S.20DH, S.20DI, S.20DJ, S.20DK, S.20DL, S.20DM, S.20DN, S.20DO, S.20DP, S.20DQ, S.20DR, S.20DS, S.20DT, S.20DU, S.20DV, S.20DW, S.20DX, S.20DY, S.20DZ, S.20EA, S.20EB, S.20EC, S.20ED, S.20EE, S.20EF, S.20EG, S.20EH, S.20EI, S.20EJ, S.20EK, S.20EL, S.20EM, S.20EN, S.20EO, S.20EP, S.20EQ, S.20ER, S.20ES, S.20ET, S.20EU, S.20EV, S.20EW, S.20EX, S.20EY, S.20EZ, S.20FA, S.20FB, S.20FC, S.20FD, S.20FE, S.20FF, S.20FG, S.20FH, S.20FI, S.20FJ, S.20FK, S.20FL, S.20FM, S.20FN, S.20FO, S.20FP, S.20FQ, S.20FR, S.20FS, S.20FT, S.20FU, S.20FV, S.20FW, S.20FX, S.20FY, S.20FZ, S.20GA, S.20GB, S.20GC, S.20GD, S.20GE, S.20GF, S.20GG, S.20GH, S.20GI, S.20GJ, S.20GK, S.20GL, S.20GM, S.20GN, S.20GO, S.20GP, S.20GQ, S.20GR, S.20GS, S.20GT, S.20GU, S.20GV, S.20GW, S.20GX, S.20GY, S.20GZ, S.20HA, S.20HB, S.20HC, S.20HD, S.20HE, S.20HF, S.20HG, S.20HH, S.20HI, S.20HJ, S.20HK, S.20HL, S.20HM, S.20HN, S.20HO, S.20HP, S.20HQ, S.20HR, S.20HS, S.20HT, S.20HU, S.20HV, S.20HW, S.20HX, S.20HY, S.20HZ, S.20IA, S.20IB, S.20IC, S.20ID, S.20IE, S.20IF, S.20IG, S.20IH, S.20II, S.20IJ, S.20IK, S.20IL, S.20IM, S.20IN, S.20IO, S.20IP, S.20IQ, S.20IR, S.20IS, S.20IT, S.20IU, S.20IV, S.20IW, S.20IX, S.20IY, S.20IZ, S.20JA, S.20JB, S.20JC, S.20JD, S.20JE, S.20JF, S.20JG, S.20JH, S.20JI, S.20JJ, S.20JK, S.20JL, S.20JM, S.20JN, S.20JO, S.20JP, S.20JQ, S.20JR, S.20JS, S.20JT, S.20JU, S.20JV, S.20JW, S.20JX, S.20JY, S.20JZ, S.20KA, S.20KB, S.20KC, S.20KD, S.20KE, S.20KF, S.20KG, S.20KH, S.20KI, S.20KJ, S.20KL, S.20KM, S.20KN, S.20KO, S.20KP, S.20KQ, S.20KR, S.20KS, S.20KT, S.20KU, S.20KV, S.20KW, S.20KX, S.20KY, S.20KZ, S.20LA, S.20LB, S.20LC, S.20LD, S.20LE, S.20LF, S.20LG, S.20LH, S.20LI, S.20LJ, S.20LK, S.20LL, S.20LM, S.20LN, S.20LO, S.20LP, S.20LQ, S.20LR, S.20LS, S.20LT, S.20LU, S.20LV, S.20LW, S.20LX, S.20LY, S.20LZ, S.20MA, S.20MB, S.20MC, S.20MD, S.20ME, S.20MF, S.20MG, S.20MH, S.20MI, S.20MJ, S.20MK, S.20ML, S.20MM, S.20MN, S.20MO, S.20MP, S.20MQ, S.20MR, S.20MS, S.20MT, S.20MU, S.20MV, S.20MW, S.20MX, S.20MY, S.20MZ, S.20NA, S.20NB, S.20NC, S.20ND, S.20NE, S.20NF, S.20NG, S.20NH, S.20NI, S.20NJ, S.20NK, S.20NL, S.20NM, S.20NN, S.20NO, S.20NP, S.20NQ, S.20NR, S.20NS, S.20NT, S.20NU, S.20NV, S.20NW, S.20NX, S.20NY, S.20NZ, S.20OA, S.20OB, S.20OC, S.20OD, S.20OE, S.20OF, S.20OG, S.20OH, S.20OI, S.20OJ, S.20OK, S.20OL, S.20OM, S.20ON, S.20OO, S.20OP, S.20OQ, S.20OR, S.20OS, S.20OT, S.20OU, S.20OV, S.20OW, S.20OX, S.20OY, S.20OZ, S.20PA, S.20PB, S.20PC, S.20PD, S.20PE, S.20PF, S.20PG, S.20PH, S.20PI, S.20PJ, S.20PK, S.20PL, S.20PM, S.20PN, S.20PO, S.20PP, S.20PQ, S.20PR, S.20PS, S.20PT, S.20PU, S.20PV, S.20PW, S.20PX, S.20PY, S.20PZ, S.20QA, S.20QB, S.20QC, S.20QD, S.20QE, S.20QF, S.20QG, S.20QH, S.20QI, S.20QJ, S.20QK, S.20QL, S.20QM, S.20QN, S.20QO, S.20QP, S.20QQ, S.20QR, S.20QS, S.20QT, S.20QU, S.20QV, S.20QW, S.20QX, S.20QY, S.20QZ, S.20RA, S.20RB, S.20RC, S.20RD, S.20RE, S.20RF, S.20RG, S.20RH, S.20RI, S.20RJ, S.20RK, S.20RL, S.20RM, S.20RN, S.20RO, S.20RP, S.20RQ, S.20RR, S.20RS, S.20RT, S.20RU, S.20RV, S.20RW, S.20RX, S.20RY, S.20RZ, S.20SA, S.20SB, S.20SC, S.20SD, S.20SE, S.20SF, S.20SG, S.20SH, S.20SI, S.20SJ, S.20SK, S.20SL, S.20SM, S.20SN, S.20SO, S.20SP, S.20SQ, S.20SR, S.20SS, S.20ST, S.20SU, S.20SV, S.20SW, S.20SX, S.20SY, S.20SZ, S.20TA, S.20TB, S.20TC, S.20TD, S.20TE, S.20TF, S.20TG, S.20TH, S.20TI, S.20TJ, S.20TK, S.20TL, S.20TM, S.20TN, S.20TO, S.20TP, S.20TQ, S.20TR, S.20TS, S.20TT, S.20TU, S.20TV, S.20TW, S.20TX, S.20TY, S.20TZ, S.20UA, S.20UB, S.20UC, S.20UD, S.20UE, S.20UF, S.20UG, S.20UH, S.20UI, S.20UJ, S.20UK, S.20UL, S.20UM, S.20UN, S.20UO, S.20UP, S.20UQ, S.20UR, S.20US, S.20UT, S.20UU, S.20UV, S.20UW, S.20UX, S.20UY, S.20UZ, S.20VA, S.20VB, S.20VC, S.20VD, S.20VE, S.20VF, S.20VG, S.20VH, S.20VI, S.20VJ, S.20VK, S.20VL, S.20VM, S.20VN, S.20VO, S.20VP, S.20VQ, S.20VR,

# FLOW OF STERILE INSTRUMENTS

Options:

1. AGV
2. Supply via AGV and Returns via ETV
3. Supply and Returns via ETV



