

CLAIMS

1. A patient turning apparatus (100) comprising:
 - a reconfigurable support platform (110) comprising:
 - a plurality of laterally extending support slats (130) configured for pivotal movement about a longitudinally extending central region (111) of the platform;
 - at least one support slat (130) being configured to follow a pivotal movement of a longitudinally adjacent support slat about the central region (111), through at least a portion of a pivotal range of movement of the longitudinally adjacent support slat;
 - the apparatus further comprising means (160) operable to control pivotal movement of at least one support slat of the platform about the central region.
2. Apparatus according to claim 1, wherein each support slat (130) is configured to follow a pivotal movement of a longitudinally adjacent support slat about the central region (111), through at least a portion of a pivotal range of movement of the longitudinally adjacent support slat (130).
3. Apparatus according to claim 1 or 2, wherein the support slats (130) are interconnected (124) to permit the support slats to pivot in response to a pivoting of a longitudinally adjacent support slat beyond a threshold pivotal range.
4. Apparatus according to any preceding claim, wherein the support slats (130) extend in a substantially parallel configuration when configured in an un-pivoted configuration.
5. Apparatus according to any preceding claim, wherein the support slats (130) are longitudinally separated along the platform (110).
6. Apparatus according to any preceding claim, wherein the plurality of laterally extending support slats (130) comprise a first plurality of laterally extending support

slats which extend to a first side of the central region and a second plurality of laterally extending support slats which extend to a second side of the central region.

7. Apparatus according to claim 6, wherein the first and second plurality of support slats extend in substantially the same plane when configured in an un-pivoted configuration.
8. Apparatus according to any preceding claim, wherein the support platform further comprises a support sheet (120).
9. Apparatus according to claim 8, wherein the support sheet (120) comprises a plurality of laterally extending pockets (121,122) formed therein for separately receiving a support slat.
10. Apparatus according to claim 9, wherein the pockets (121,122) extend from a longitudinally extending central portion (123) of the support sheet (120) and comprise a respective opening (121a,122a) formed proximate a lateral edge of the support sheet.
11. Apparatus according to claim 10, wherein the support sheet (120) comprises a first plurality of laterally extending pockets (121a) which extend to a first side of the central portion of the support sheet and a second plurality of laterally extending pockets (112a) which extend to a second side of the central portion of support sheet.
12. Apparatus according to any preceding claim, further comprising a reconfigurable base (140) which is disposed in use at an underside of the platform (110).
13. Apparatus according to claim 12, wherein the base (140) comprises a plurality of laterally extending base slats (152).
14. Apparatus according to claim 13, wherein the base slats (152) extend across a width of the base (140), to either side of a central region of the base.
15. Apparatus according to claim 14, wherein the base comprises a base sheet (150) formed of a plastics or fabric material.

16. Apparatus according to claim 15, wherein the base sheet (150) comprises a plurality of laterally extending pockets (153) formed therein for separately receiving a base slat (152).
17. Apparatus according to claim 16, wherein the pockets (153) extend along a width of the base sheet (150), to either side of a central portion of the base sheet, and comprise an opening formed at one end thereof, through which a slat (152) can be inserted into the pocket.
18. Apparatus according to claim 16 as appended to claim 10, wherein the central portion (123) of the support sheet (120) and a central region (141) of the base (140) are coupled together via rivets which extend through the support sheet and the base sheet (150), and at least one of the slats (152) which extend across the width of the base sheet.
19. Apparatus according to claim 13, wherein the plurality of base slats (152) are configured for pivotal movement about a longitudinally extending central region (141) of base (140).
20. Apparatus according to claim 19, wherein, the plurality of base slats (152) comprise a first plurality of laterally extending base slats which extend to a first side of the central region and a second plurality of laterally extending base slats which extend to a second side of the central region.
21. Apparatus according to claim 19 or 20, wherein the base (140) further comprises a base sheet (150).
22. Apparatus according to claim 21, wherein the base sheet (150) comprises a plurality of laterally extending pockets formed therein for separately receiving a base slat.
23. Apparatus according to claim 22, wherein the pockets (153) extend from a longitudinally extending central portion of the base sheet and comprise a respective opening formed proximate a lateral edge of the base sheet (150).
24. Apparatus according to claim 23, wherein the base sheet (150) comprises a first plurality of laterally extending pockets which extend to a first side of the central

portion of the base sheet and a second plurality of laterally extending pockets which extend to a second side of the central portion of base sheet.

25. Apparatus according to claim 23 as appended to claim 10, wherein the central portion (123) of the support sheet (120) and the central portion of the base sheet are coupled together via rivets or a weld or other fastening.
26. Apparatus according to any preceding claim, wherein the means operable to control pivotal movement (160) of at least one support slat (130) of the platform is disposed, in use, at an underside of the platform (110).
27. Apparatus according to any preceding claim, wherein the means operable to control pivotal movement (160) of at least one support slat of the platform comprises an inflatable bladder (161).
28. Apparatus according to claim 27, wherein the inflatable bladder (161) is disposed between the platform (110) and the base (140) to permit the support slats (130) to pivot with respect to the base.
29. Apparatus according to claim 27 or 28, wherein the inflatable bladder (161) extends longitudinally of the apparatus (100).
30. Apparatus according to any of claims 27-29, further comprising a plurality of inflatable bladder portions (161a,161b,161c), wherein the bladder portions are fluidly coupled via a conduit (162).
31. Apparatus according to any of claims 27 to 30, further comprising a pump which is fluidly coupled to the inflatable bladder (161) via a duct.
32. Apparatus according to claim 31, further comprising a control unit (170) for controlling operation of the pump to control a selected inflation and deflation of the inflatable bladder (161).
33. Apparatus according to claim 32, wherein the control unit (170) further comprises a timer or clock for inflating and deflating the inflatable bladder (161) at pre-selected times.

34. Apparatus according to any of claims 27 to 33, wherein the inflatable bladder (161) comprises a first inflatable bladder and a second inflatable bladder, respectively disposed in use at an underside of the first and second plurality of support slats (130).
- 5 35. Apparatus according to claim 34, appended to claim 32, wherein the control unit (170) and pump are arranged to selectively inflate and deflate the first and second inflatable bladder.
36. Apparatus according to any preceding claim, wherein the support slats (130), base slats (152), support sheet (120) and base sheet (150) are enclosed within a
10 removable cover, which can be sealed to minimise any ingress of dirt or infectious material.
37. Apparatus according to any of claims 1 to 7, wherein the support platform comprises a plurality of interconnected support elements, each element being detachably coupled at a proximal end thereof, to a longitudinally extending central region (311)
15 of a reconfigurable base, disposed in use at an underside of the platform (310).
38. Apparatus according to claim 37, wherein the support elements are orientated to extend laterally across the support platform, and comprise a first plurality of support elements which extend to a first side of a longitudinally extending central portion of the platform and a second plurality of support elements which extend to a second
20 side of the central portion of the platform.
39. Apparatus according to claim 37 wherein the pockets (321) extend from a central portion (323) of the platform, to either side of the central portion and comprise an opening formed at a distal end thereof, through which a support slat can be inserted into the pocket (321).
- 25 40. Apparatus according to claim 39, wherein the supports elements comprise a substantially triangular shape, whereby sides of each element converge from the distal end to the proximal end thereof.

41. Apparatus according to any of claims 37 to 40, wherein the means operable to control pivotal movement (360) of at least one support slat of the platform comprises an inflatable bladder (361).
42. Apparatus according to claim 41, wherein the inflatable bladder comprises at least
5 two inflatable chambers (361a, 361b).
43. Apparatus according to claim 41 or 42, wherein each support element comprises a respective inflatable bladder (361) for effecting a pivotal movement of the respective support slat.
44. Apparatus according to claim 37, wherein the reconfigurable base comprises a base
10 sheet.
45. Apparatus according to claim 44, wherein the base sheet comprises a plurality of laterally extending pockets formed therein for separately receiving a base slat.
46. Apparatus according to claim 45, wherein the pockets extend from a longitudinally
15 extending central region (311) of the base sheet and comprise a respective opening formed proximate a lateral edge of the base sheet.
47. Apparatus according to claim 45 or 46, wherein the base sheet comprises a first plurality of laterally extending pockets which extend to a first side of the central region of the base sheet and a second plurality of laterally extending pockets which extend to a second side of the central region of base sheet.
- 20 48. Apparatus according to any of claims 37 to 47, wherein the support elements are interconnected to permit the support slats (330) to pivot in response to a pivoting of a longitudinally adjacent support slat beyond a threshold pivotal range.
49. Apparatus according to any of claims 41 to 47, wherein the inflatable chambers (361a,b) of each support element are fluidly coupled to each other via a conduit.
- 25 50. Apparatus according to any of claims 41, further comprising a control unit (370b) and a pump (370a), the control unit being arranged to control operation of the pump to control a selected inflation and deflation of the inflatable bladder (361).

51. Apparatus according to claim 50, wherein the control unit (370b) further comprises a timer or clock for inflating and deflating one or more of the inflatable cells at pre-selected times.

52. A patient turning apparatus (300) comprising:

- 5 a reconfigurable support platform (310) comprising:
- a first plurality of laterally extending support slats (331) which extend to a first side of a central region (311) of the platform and a second plurality of laterally extending support slats (332) which extend to a second side of the central region (311) of the platform, both the first
- 10 plurality and second plurality of laterally extending support slats being configured for pivotal movement about the longitudinally extending central region (311) of the platform;
- at least one support slat (330) being configured to follow a pivotal movement of a longitudinally adjacent support slat about the central
- 15 region (311), through at least a portion of a pivotal range of movement of the longitudinally adjacent support slat;
- a pivot controlling means (160) operable to control pivotal movement of at least one support slat (330) of the platform (310) about the central region;
- and
- 20 a reconfigurable base (340) detachably coupled to and disposed in use at an underside of the reconfigurable support platform (310).

53. A method (400) of turning a patient using a patient turning apparatus according to any previous claim, the method comprising the steps:

 pivoting a first plurality of laterally extending support slats through a first pivotal range

25 (401);

 subsequently pivoting a second plurality of laterally extending support slats through a second pivotal range (402), the second pivotal range being less than that of the first pivotal range; and

subsequently pivoting the first plurality of laterally extending support slats beyond the first pivotal range, while the second plurality of support slats remain pivoted through the second pivotal range.