Dynamic Seating Survey Results and Summary Survey Monkey 4/18/16 - 5/20/16 Michelle L. Lange, OTR/L, ABDA, ATP/SMS, 6/9/16 103 responses, 100 visible responses (reached limit of free version) Questions: 1. Are you currently using dynamic seating? 99 responses, 1 skipped a. Yes 86.7% 86 b. No 13.13% 13 2. What is your role in the use of dynamic seating? (mark all that apply) 96 responses, 4 skipped In descending order: a. I recommend dynamic seating 85.42% 82 b. I work with clients who are currently using dynamic seating 67.71% 65 c. I supply dynamic seating (i.e. install, adjust, repair) 47.92% 46 3. What category of dynamic seating are you using most? 93 responses, 7 skipped a. Modular (one or more separate dynamic components added to a wheelchair) 65.59% 61

b. Integrated (typically a wheelchair with integrated dynamic movement in more than one area) 34.41% 32

4. What body areas do you most frequently apply dynamic movement?(rank in order, 1 being most frequent and 5 being least frequent)94 responses, 6 skipped

	1	2	3	4	5	Total	Score
Trunk	35.63%	32.18%	20.69%	6.90%	4.60%	87	3.87
	31	28	18	6	4		
Lower	30.34%	24.72%	31.46%	8.99%	4.49%	89	3.67
Extremities	27	22	28	8	4		
Pelvis	23.26%	25.58%	16.28%	20.93%	13.95%	86	3.23
	20	22	14	18	12		
Head	7.87%	16.85%	24.72%	35.96%	14.61%	89	2.67
	7	15	22	32	13		
Upper	8.33%	4.76%	5.95%	22.62%	58.33%	84	1.82
Extremities	7	4	5	19	49		

In descending order:

5. For which client populations do you most frequently apply dynamic movement?

92 responses, 8 skipped

a. Clients with increased muscle tone (i.e. cerebral palsy, brain injury)	79.35%	73
b. Clients who need movement (i.e. clients who tend to rock)	20.65%	19

Comments (9):

- 1. I am about equal on the 2 choices above
- 2. SCI for skin and positioning against gravity (Note this respondent's other comments indicate an assumption that dynamic seating is referring to tilt and recline)
- 3. Whoever needs it...mark both above
- 4. Children with severe dystonia
- 5. I would say it is equally divided between increased muscle tone and clients who need movement
- 6. Low tone
- 7. Both!

8. Both do apply

9. TBI

6. For which purpose do you most frequently apply dynamic movement? (rank in order, 1 being most frequent and 10 being least frequent) 95 responses, 5 skipped

In descending order:

	1	2	3	4	5	6	7	8	9	10	Total	Score
To increase	33.33%	25.56%	16.67%	8.89%	8.89%	2.22%	1.11%	1.11%	1.11%	1.11%		
sitting	30	23	15	8	8	2	1	1	1	1	90	8.34
tolerance												
and												
compliance												
To protect	31.46%	14.61%	11.24%	13.48%	5.62%	5.62%	3.37%	2.25%	3.37%	8.99%		
wheelchair	28	13	10	12	5	5	3	2	3	8	89	7.28
and												
seating												
hardware												
from												
breakage												
То	3.49%	19.77%	24.42%	13.95%	11.63%	8.14%	9.30%	5.81%	1.16%	2.33%		
decrease	3	17	21	12	10	7	8	5	1	2	86	6.76
agitation												
To increase	10.98%	13.41%	10.98%	12.20%	10.98%	14.63%	13.41%	9.76%	1.22%	2.44%		
function	9	11	9	10	9	12	11	8	1	2	82	6.30
To reduce	15.91%	7.95%	6.82%	10.23%	11.36%	6.82%	9.09%	17.05%	7.95%	6.82%		
active	14	7	6	9	10	6	8	15	7	6	88	5.69
extension												
To provide	1.22%	9.76%	9.76%	20.73%	7.32%	7.32%	12.20%	10.98%	12.20%	8.54%		
active	1	8	8	17	6	6	10	9	10	7	82	5.18
range of												
motion												
To increase	6.17%	7.41%	4.94%	7.41%	8.64%	12.35%	16.05%	9.88%	16.05%	11.11%		

strength	5	6	4	6	7	10	13	8	13	9	81	4.70
and												
postural control												
To reduce	1.18%	3.53%	5.88%	2.35%	11.76%	16.47%	14.12%	18.82%	15.29%	10.59%		
energy exertion	1	3	5	2	10	14	12	16	13	9	85	4.14
To provide	1.27%	3.80%	10.13%	5.06%	15.19%	8.86%	7.59%	11.39%	7.59%	29.11%		
vestibular	1	3	8	4	12	7	6	9	6	23	79	4.08
input												
To increase	0.00%	1.27%	2.53%	6.33%	6.33%	13.92%	13.92%	10.13%	30.38%	15.19%		
alertness	0	1	2	5	5	11	11	8	24	12	79	3.46

7. What are the greatest challenges you meet in applying dynamic seating? (mark all that apply)

92 responses, 8 skipped

In descending order:

a. Funding	58.70%	54
b. Durability	48.91%	45
c. The client returns to a "starting position", but is no longer in the desired posture	47.83%	44
d. The client does not return to a "starting position" (the dynamic component remains activated)	34.78%	32
e. The client cannot activate/move the dynamic component	21.74%	20
f. Dynamic movement appears to worsen frequency of force of extension	13.04%	12

Comments (8):

1. Proper use and proper training of use

2. Alignment of the dynamic component with the joint, decreased ability to integrate multiple joints, limitations of systems that are more fully integrated

3. Kids Rock is the only one that worked well as an integrated system. My thoughts other systems only piece it together

4. Caregiver understanding/compliance

5. Weight in manual wheelchairs

6. No challenges

7. Caregivers not understanding how to use (high turnover) therefore it is left locked all the time or unlocked all the time, regardless of what is appropriate or intended

8. The polymer plug style is not replaced with adequate frequency – the mechanical actuators fail in a way that replacement is obviously required and then end user knows to request repair, but this does not happen with dynamic components that do not have an obvious "fail"

8. Do you believe that dynamic seating is underutilized in our field?99 responses, 1 skipped

a. Yes	88.89%	88
b. No	11.11%	11

Do you believe our field needs more dynamic seating product options?
97 responses, 3 skipped

In descending order:

a. Yes	75.26%	73
c. I believe there are enough product options, but these options could work better	19.59%	19
b. No	5.15%	5

10. Do you have any other comments on dynamic seating?

32 responses, 67 skipped

- 1. There have been some great innovations & improvements in recent years...i think that continued product development would continue to improve these dynamic components.
- 2. very expensive and allowables are low
- 3. A miracle when done right for the right kido at the right time. Too much limited by cost so I am told by my people
- 4. I'm a RRTS Just getting involved in rehab so some of my answers may not be correct, but I did my best at answering them
- 5. Not too sure what this survey is getting at. The need for dynamic seating is very individualized. The questions seem to be leading. Issue with dynamic seating is it's over prescription to compensate for poor seating. It hinders seat height, weight of w/c, size of w/c and it is not practical for clients with busy lives. They can't tilt, recline etc... every 30 min. I have patients coming in wanting it due to low tone and lateral tendency. Makes sense, they meet the criteria only to return 6 months later saying their posture is good when in tilt, recline

but as soon as they sit up they fall back in to their tendency. "I have to stay in tilt all day then". We tend to go towards dynamic seating too fast before determining what the body support system can do better. We do not give proper training on dynamic seating to clients and their caregivers over multiple appointments and over longer periods of time. Tilt alone seems to be the best option with proper body support system (customized?) (*Note - this respondent's responses indicate an assumption that dynamic seating is referring to tilt and recline*)

- 6. No
- 7. What about dynamic covers to reduce shear (i.e. glide wear by Comfort Co but on head rest covers, arm rests, etc)
- 8. I think that insurances really need to have a better understanding of the use of dynamic seating so they will fund it more often
- 9. We need more options and they need to better built and more reliable
- 10. dynamic systems that allow for the pelvis to remain in a neutral position, or as close to neutral as pt. can achieve, but allow the back only to "open" above the pelvis tend to work better than those that "open" at the seat and back junction. The latter allow the pelvis to posteriorly tilt after returning to the start position.
- 11. Dynamic seating has been life changing for some of my patients, especially the legrests!
- 12. Interested in sharing our experiences and learning from others about seating those with dementia, as they decline, including clients with Huntingtons
- 13. I used modular dynamic components more (legrests, headrest) when I first started working in seating and we did in-house custom seating, then did not use them as frequency for a period. I have started using components more frequently again. It seems that the components are more readily available and our vendors are more familiar than they were in the past. I wish we had more opportunities to demo the equipment before recommending it to determine if it will work for the patient.
- 14. My answer to question 3 would have been both, but survey did not allow me. Also I feel there is a strong need for a lightweight dynamic back interface for K0005 K0009 chairs, and have been asking manufacturers for it for many years with ne success
- 15. the add on types are very heavy and for the weight are not well designed for durability/weight ratio and are very expensive, also the elastomers wear out very fast.
- 16. N/A
- 17. I have had difficulties with lower limb options not dealing with flexor tone in the lower limbs and having to use dynamic devices intended for other functions to try to accommodate this. There is very poor understanding of dynamic interfaces by 3rd party payors
- 18. Appreciate your look at this- feel that it could be way more beneficial, less costly and better implemented!
- 19. Feel free to contact me personally to discuss. More than glad to share my opinion and thoughts.
- 20. Funding needs to be better
- 21. Dynamic seating needs to be taught as a component of seating and positioning classes at all levels and should be integrated into more seating systems
- 22. We need less used car salesman and more seating specialists

- 23. As a supplier it would be beneficial to receive more education on the benefits of dynamic seating and if there are any source reference material available to make it known and available.
- 24. I don't know when to use dynamic seating I saw real trends in this direction in about 2004 now I see a reversal of that trend. I have heard that it is better not to use dynamic seating components as clients are trying to reach a stable end point from which function can be improved. Adding a dynamic component could only cause more movement in the system. I would like clinical indicators for using dynamic components. I find vendors are not very knowledgeable about when to use dynamic components and it is difficult to get components in to try to see how they work and if they would be successful so I feel that I am forced to 'guess'.
- 25. None at this time
- 26. need more clinical benefit analysis for therapists to get excited about it.
- 27. I believe more, that there needs to be more education on dynamic seating. How it works, success and failures with it
- 28. I work mostly with CP /TBI population and see a significant difference in functional sitting and postural control when using dynamic back/foot hardware in relation to extension tone. I have seen an improvement in overall upright posture as well as a decrease in wear specifically on angle adjustable foot plate hardware when using dynamic hardware
- 29. I would like to see products that work better. Each one I have tried has its pitfalls.
- 30. It is my general experience that it is seldom efficacious, all things considered, to completely immobilize a human, thus, "dynamic" is beneficial to a greater or lesser extent, and is indeed often underutilized to the clients detriment. That said, I am well aware of the challenges presented in managing "bad" movement. Each client is different, but the vast majority probably benefit from "least" restrictive support. Until we know otherwise, my opinion, after 28 yrs as a clinician, is we must be certain we "do no harm", thus, let them move! :)
- 31. overall my experiences have not been good, not sure if the efficacy is there. Lots of repairs to moving parts and no real positive outcomes, not worth the added repairs, loss of positioning and seems to be misused.
- 32. more professional development in this area for pediatrics needed

Summary of Results:

Useage:

About 87% of the respondents currently use dynamic seating, with 85% recommending, 68% working with clients using dynamic seating and 48% supplying dynamic seating.

66% use modular dynamic seating components while 34% use integrated systems.

Application by body area:

By area of the body, dynamic seating is being used most frequently at the trunk, followed by the lower extremities, pelvis, head, and upper extremities. This survey did not specify which direction movement was applied. Posterior movement of the trunk often allows posterior movement of the pelvis, depending on the specific dynamic components.

Client Applications:

79% most frequently use dynamic seating with clients who have increased tone and 21% with clients who need movement.

10 purposes or goals of dynamic seating were proposed and participants were asked to rank these in order of which "purpose" was most frequently the "goal" of dynamic seating with clients. These are listed in descending frequency:

To increase sitting tolerance and compliance

To protect wheelchair and seating hardware from breakage

To decrease agitation

To increase function

To reduce active extension

To provide active range of motion

To increase strength and postural control

To reduce energy exertion

To provide vestibular input

To increase alertness

Product challenges:

The greatest challenges were indicated as follows, in order of descending frequency:

Funding

Durability

The client returns to a "starting position", but is no longer in the desired posture

The client does not return to a "starting position" (the dynamic component remains activated) The client cannot activate/move the dynamic component Dynamic movement appears to worsen frequency of force of extension

89% of participants believe dynamic seating is underutilized. 75% believe we need more product options, 20% believe that the current options could be improved

Comments indicate that more education is needed for caregivers, funding sources, and seating team members. Comments also indicate a need to improve current products, develop further products, as well as reduce weight and cost.

Next Steps:

This information will be written up in an article and hopefully published in the future.